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THE INSIDER'S GUIDE TO THE FUTURE OF...

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Rare on Xbox: Just what is Microsoft getting for its \$375m?

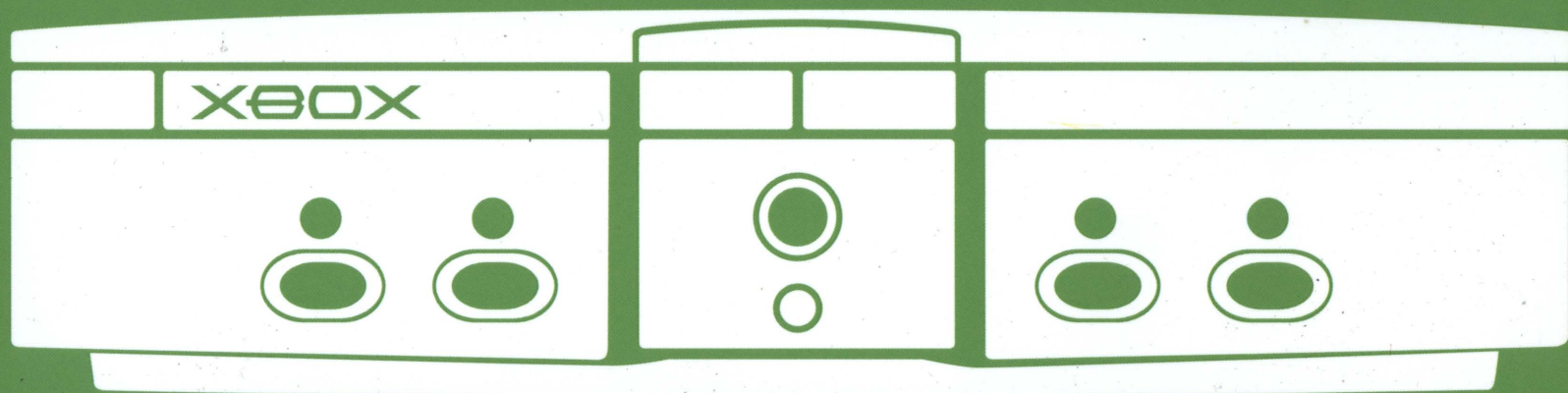
Modifying the machine: Ten projects to overhaul your Xbox

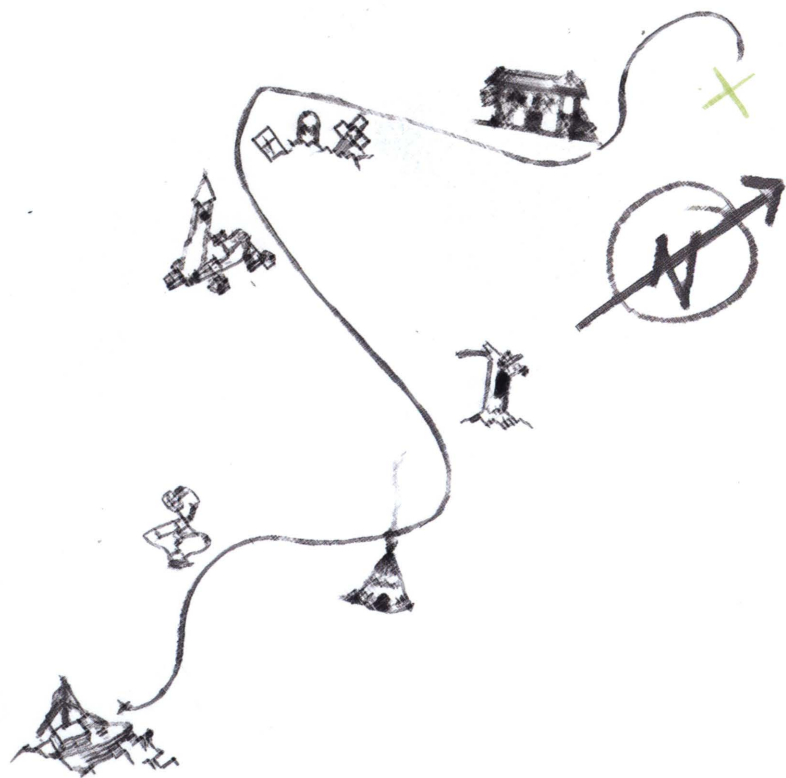
Top ten: New looks at Halo 2, Project Gotham Racing 2, BC, Fable, Amped 2, Ninja Gaiden...

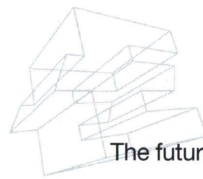
Interview: Microsoft games chief Ed Fries on Xbox beating PS2

The Making Of... Halo

XBOX[™]








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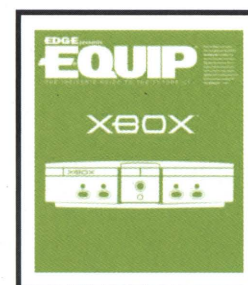
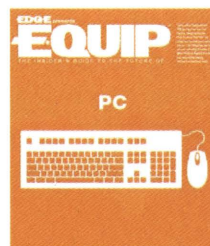
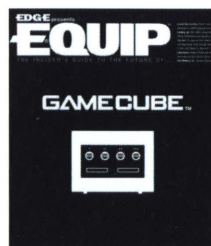
The future of electronic entertainment

No one can deny that Microsoft has gone great guns from a standing start in the console hardware race. It has made mistakes, but it's willing to learn from them – making the more compact S-Controller a worldwide standard was one of its admissions on a small scale, while its recent hiring of SquareSoft's chief operating officer to head up its reshuffled Japanese organisation ranks as something rather more significant.

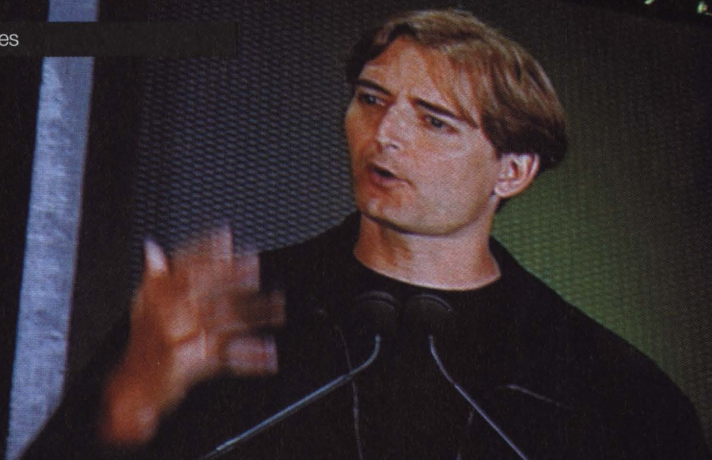
But now it seems that the American company has decided that aiming its console squarely at hardcore gamers could have been an error, too, for it's revving up to chase the younger crowd, largely via the efforts of a certain parochial British outfit. This issue of **Equip** features a report on what Rare is working on bringing to the strapping black box (see p28). (Clue: it's not *Perfect Dark Zero* – yet.)

Then there's online gaming. How much does Microsoft lament that its console will not be able to run the EA Sports titles – the biggest franchises of their kind in the world – over its proven Xbox Live initiative? It may not be such a big deal in Europe, where far less than 100,000 users are actually subscribed to Microsoft's online service, but in its heartland, where half a million players frequently yell at each other down Xbox broadband pipes, and American football, basketball and ice hockey are megabucks businesses, the potential for missed opportunity is simply stupendous.

But, to paraphrase Xbox progenitor Seamus Blackley's words from his **Equip** interview (see p92), many more things have gone right than seriously wrong. And, anyway, it's all good learning experience for Xbox 2... 



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"I want to compete with movies and television, and great books and plays"



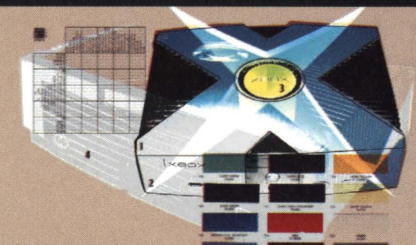
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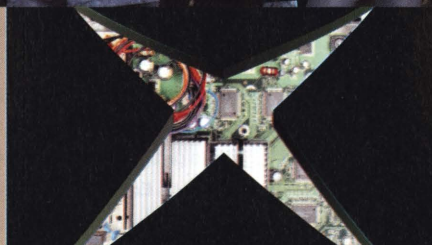
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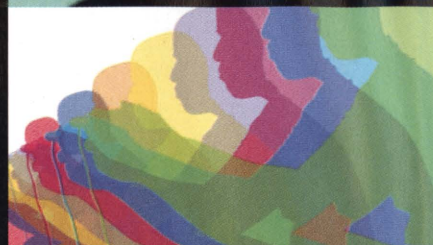
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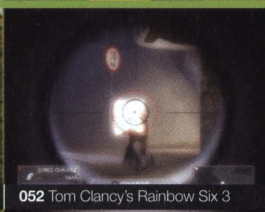
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RedEye walks down the wooden steps with a measured gait, careful not to stumble. There are 15 steps until you hit the solid stone floor. The last drops you a couple of inches more than you might expect, but RedEye expects it and doesn't stumble, even though there's no light. The naked bulb blew 18 months ago. RedEye keeps swearing to replace it. But he doesn't come down to the basement often, and he won't replace it, tomorrow or the next week or probably ever.

Now... Shhh. RedEye stands as still as he can, closing his eyes and recreating the room's layout in his mind. But, almost as soon as a picture starts to form, it is broken by a scuttle from one corner, a creak from the other. These are the places where ghosts live, where they wisp and breathe and breed, in the darkness, dampness, inside your head. RedEye puts a hand out to the banister for comfort, but grabs thin air. Somehow he's been

from the damp, but blunt from overuse.

RedEye approaches the desk. As he gets within a yard the case lunges towards him, and there is a horrific sound, metal scraping against stone. But the chains do their job, rattle and tighten, and the box clangs back to the floor. The monitor tilts downwards slightly, as if to nod, or perhaps to glare. "Greetings, RedEye," says the PC through its speakers, with the voice of Pee Wee Herman. "Shall we play a game?" The screen flares up Tic-Tac-Toe for a second, then fades back into text: "LOL!!!!"

RedEye sits down at the chair, then glides it a good distance away from the keyboard, a similar, safe distance he's seen police officers use when interrogating psychopaths. The PC plays chicken.wav and clucking echoes round the room, but RedEye ignores it – just looks down at the floor, and then places his hands by his mouth in a prayer

spec. The constant hum of the fans, the sheer size of the machine. The uncomfortable chair, the eyeball-drying monitor, the keyboard and mouse, the motherfucking keyboard and mouse!"

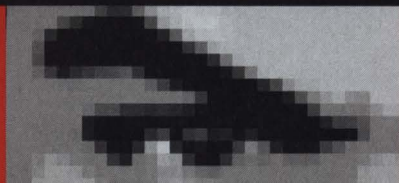
RedEye exhales. The monitor flicks off, and there is a pause in the darkness.

"Settle, petal," says his hateful computer, flicking its screen back on, and screensaving a calming fishtank. "And listen..."

"The price of remaining at the frontier is that you have to fight the wilderness. If you want to see the future before anyone else, you have to put in the effort. You have to really want to be there."

The aquarium becomes a hypnotic quick flash montage.

"I have always been the future. I had online gaming years before Live; user-created content ten years ago that remains beyond the wildest dreams of those confined to consoles. I brought a new



REDEYE

A sideways look at the videogame industry
Dungeon keeper

turned around, or stepped forward, and now the blackness takes him. He is drowning.

Blink. That's all it takes, isn't it? A blink, a moment. RedEye can feel the hum of electricity, knows something's about to happen a fraction of a second before it does. There is that blink, a microswitch tripped and a low hum. Another fraction of a second – RedEye is stood still, petrified in slow motion – and a rectangle of pure light appears at waist height in the corner. The square bathes the room in an unsteady, sickly blue-white flicker. RedEye's eyes adjust to illumination; first they pick out the stone walls, then the thick, wooden desk. Then the dirty beige box, and then the monitor from where the light radiates.

And then the characters on the monitor, black system font on a white screen:

"LOL!!!!"

RedEye hates his PC. And RedEye's PC hates him back, which is why he keeps it here, in the basement. The case is secured to the wall with two thick iron chains. Likewise, the monitor has a metal cuff around its neck, locking it down to the desk. That desk is carved with a thousand notches, one for every bluescreen. More than a thousand, probably. The knife that lies by the mouse is rusty

to some Greek god of tech. Then he looks back up, back at the monitor, squarely in its central cluster of pixels.

"Why," says RedEye, in a measured tone.

"Why do you do it to me?"

"I don't know what you mean!" replies the PC

"There will always be problems for pioneers at the forefront of technology, because every step we take brings new problems"

with mock indignance, flashing up a halo on its VDU. RedEye pauses. "Yes, you do," he says. "Yes, you do." He takes a deep breath.

"The feeling of despair when your brand-new hardware is outdated after three months. The cyclical upgrades; the catfights between processor producers, graphics card manufacturers, audiophiles and their speaker friends. The community, so barbaric and hostile and quick to shred. The necessity to patch and patch and patch again. The crashes, the horrendous crashes.

"The need to install. The games; the same games, again and again, writ with different characters and stats and weapons. The ever-worsening reliance on higher resolutions as a substitute for new ideas. The very idea of minimum

audience to gaming with *The Sims*, and I'll do that again. I broke the FPS, the RTS, the RPG; I was first in almost every genre, and I'll be first in new ones, too. I evolve; I can be as fast as you want me to be, the fastest thing there is. And sure, there will always be problems for pioneers at the

forefront of technology, because every step we take into the future brings new problems. And, eventually, new solutions."

The montage stops, suddenly, flicks to blue.

"People say I'm dying, RedEye. They've been saying that for a decade. I am still here. I will *always* be here, as long as you lust for tomorrow. And you'll always do that, RedEye. Everyone will."

And the blue screen fades out to black, and three characters: ":-)"

"I'm leaving," says Redeye.

"You'll be back," says his PC

"..."

"*Half-Life 2*," the PC continues. "You'll be back, and you know it, and you'll love every minute of it. You dirty little thing."

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Best Action Game - E3 2002

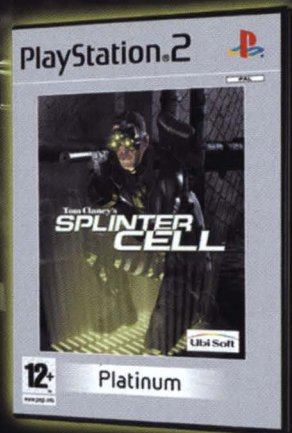
Best Game - ECTS 2002

Tom Clancy's
**SPLINTER
CELL**



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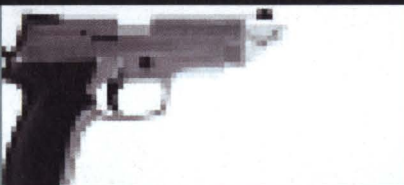
It happens all the time. I'm entertaining a guest and they glance over to the entertainment corner. The eye slides approvingly over the TV, DVD, VCR and PS2, a dance of clean, understated lines and twinkling Sony badges. Then they notice something else. "What the hell is that?" they cry, pointing distressedly at a bulging black behemoth. Ah, I explain apologetically, I'm afraid that is an Xbox. It's one of those new-fangled videogame console things; it's made by Microsoft. "And that?" they continue, pointing at a similar obscenity standing on its side next to the stand, now with a note of trembling fear in their voice. Ah, yes, that is a green Xbox. That's for playing unfinished games, I add, lamely, knowing it is hardly any excuse for such an aesthetic abomination. I feel almost as though I have been caught by UN weapons inspectors trying to construct a weapon of mass destruction, or at least as though I have made an interior-decoration faux

mode, but I did wonder to myself: can it really be that good? The Doubting Thomas was soon converted. Twenty minutes' play sufficed to persuade me that it was very good indeed, and three hours' that it was one of the best games ever made. And the importance of Bungie's masterpiece to Microsoft's young progeny can hardly be overstated. Effectively, this one game transformed the Xbox from ungainly Gates vanity project with teething troubles and a wary potential audience into a serious digital-entertainment platform.

So here we are, a couple of years on, and the mighty *Halo* is still the disc that spends the most time in my Xbox. It is still the console's one undeniable crown jewel that should cause any potential PS2 purchaser to consider at least for a moment the alternative. When it became apparent that the Xbox hadn't a hope of mounting a serious challenge to PS2's runaway global commercial

could physically fit into their studio apartments even if they wanted to, has become the natural home for hardcore Japanese brilliance: *Steel Battalion*, *Panzer Dragoon Orta* and their eye-popping ilk. The straightforward, PC-like architecture of the Xbox, it seems, doesn't need to be stroked, cajoled and seduced into performing like that of the PS2. It just gets on with the job. And naturally, that is attractive to designers who just want to get on with their art.

And what of the console's foray into online play? To be honest, it's too early to tell. Xbox Live had rather a subdued launch here, and the numbers are still low, but it has nevertheless got on with providing a relatively transparent and efficient gateway to the social playground. The decision to provide voice chat as standard was a brilliant one, and games such as *Island Thunder* provide arguably the most instantly and easily enjoyable online experience on any hardware. But Sony is hanging in there too with



TRIGGER HAPPY

Steven Poole

Trying to see beyond the aesthetics

pas that no reader of *Wallpaper** could ever forgive.

But that's the Xbox for you. It's big and it's hideous. It's easily the worst-designed piece of consumer electronics I have allowed into my home. And it still enrages me every time I plug the thing in that it defaults to a system clock-setting screen. Defenders of its shocking inability to remember the time recommend leaving it permanently plugged in, but a) I already have a Spaghetti Junction of four- and six-way adaptors coming out of the walls and there still isn't space to leave everything plugged in, and b) it's bad for the environment, mmkay?

And shall we talk about the controllers? The original controllers, that is: I didn't mind the size, since I have big hands, but I was truly astonished by their risibly illogical and impossible-to-internalise face-button layout. The eventual global release of the originally Japan-only Controller-S was an effective admission on Microsoft's part that they had simply got this wrong in the first place.

But then along came *Halo*. When I first read *Edge*'s famously reticent review of *Halo*, I was a bit sceptical. Not, of course, that I immediately defaulted to drooling rabid paranoid-conspiracy

domination, it seems, various exclusive titles quietly became time-limited exclusives, so that very interesting games like *Splinter Cell* are no longer USPs for the Microsoft console.

But the advantage of the Xbox's technical muscle becomes apparent when comparing multiformat releases. It is usually the case that the

"What the hell is that?" they cry, pointing at a bulging black behemoth. Ah, I explain apologetically, I'm afraid that is an Xbox

Xbox version is the most rock-solid in terms of visual detail and framerate. Ergonomically the PS2 may still have an edge, with its two extra shoulder buttons, for releases such as *Conflict: Desert Storm II*, but for most mainstream videogames that have not been built from day one around Sony's eccentric architecture, it is the PS2 that comes second in terms of sensory experience.

It is the Japanese connection that, given that market's widely reported mistrust of the Xbox at its birth, is the most surprising, and presumably the most satisfying for Microsoft. Somehow this hunk of plastic, that we were told few Japanese consumers

SOCOM and its ilk, and it seems that at the moment these two services merely represent corporate wargaming, dress rehearsals for the real online battle that will take place in the next generation.

It's the next generation, indeed, that will really tell whether Microsoft has what it takes. Rumours of Xbox 2 becoming more of an all-round home-

entertainment box, playing movies, recording television and suchlike, are oddly similar to the rumours of PS3's multimedia capabilities, and Sony's track record as a producer of desirable living-room hardware, as well as its ownership of a film studio and record label, will surely give it an edge in any such head-to-head fight.

But for the moment, fresh from another four-way *Halo* bout, I must doff my cap to Microsoft for having belied the sceptics and firmly staked out a credible presence in the market. I still think my Xbox is ugly as all hell, but I must confess I have grown to love it just a little bit.

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The ultimate broadband gaming experience



With this final column, I've reached the end of my 'current generation' hardware commentary (or 'ramble', if you prefer).

To recap: I idly contemplated getting a cheap PS2 again (up until the news that *GTA III* and *Vice City* were coming to Xbox). Having given up on Nintendo, I finally traded in the GameCube and related impedimenta and have a stack of credits at the local gaming emporium. And, despite a life-long loathing of the operating system, I still fancy having a dabble on a top-end gaming PC.

So to my current weapon of choice in the ongoing hardware war. Irrespective of your feelings towards Microsoft – its business practices or the quality of its software – you have to give credit where it's due: the Xbox is a tidy piece of hardware.

The design doesn't offend particularly; the size and weight doesn't bother me (bizarrely, I prefer to use a GBA SP for portable gaming); and I

in truth, this merely gave me time to focus on the launch titles in my collection.

Things changed for the better at the end of 2002, when *Splinter Cell* arrived. I'd originally had a half-hearted go at the playable demo and thought little of it. Fortunately, one bored evening, I went back and decided to complete the level. That was it: I was hooked – and thankfully the finished game didn't disappoint. So for the months over Christmas, my time was divided between *Splinter Cell* and the little delight that is Pivotal's *Conflict: Desert Storm*.

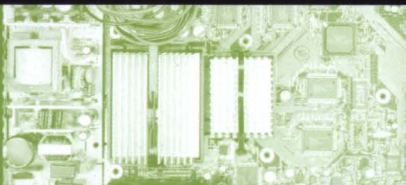
Unsurprisingly, my next step would be to Xbox Live. I already had a working broadband connection, so it seemed that adding the Xbox would be a case of plugging an Ethernet cable into my hub and playing online. Simple.

When the starter kit turned up, I booked the afternoon off with the intention of whiling away a

far the much-vaunted 'optimatch' option – which supposedly pits crap players against equally crap players – hasn't worked. The best thing for me has been the downloadable level of *Splinter Cell*, and what it bodes for the future of videogaming. I'm all for downloadable demos and buying games by the chapter; I never finish the damn things so it'll prove a lot cheaper in the long run.

So of the three current-generation machines, Microsoft's machine has been my favourite by far – although it has to be said that this summer has been an unsatisfying time of short-lived affairs with a variety of genres. *DOA Xtreme Beach Volleyball*, *Morrowind*, *Wolfenstein*, *Midnight Run II*... only *Dynasty Warriors 3* managed to overcome by attention-span deficiency.

But finally the seasonal drought has ended and I'm starting to feast on the carcass of the GameCube trade-in, having just taken delivery



HARD TIMES

Steve Jarratt

Confessions of a videogame hardware addict

appreciate the four joypad ports, the hard drive, and the broadband connectivity.

I was pretty much seduced by the tech specs as soon as they were announced, and any reservations were soon spirited away when *Edge* received its first batch of hardware and software.

One of the things I feel has been overlooked was the breadth and depth of the launch line-up. Most people list *Halo*, *Dead Or Alive 3* and maybe *Amped*, and leave it at that. But I've had tremendous fun with *Project Gotham Racing*, *Oddworld: Munch's Oddysee*, the much-underrated *Rallisport Challenge* and even (whisper it) *Wreckless*. In fact, much to my utter shame, I probably spent as much time frustratedly crashing my way through *Wreckless* as I did *Halo*. Hey, it takes all sorts...

So my Xbox experience got off to a great start.

But, as with all console launches, there's that annoying post-climactic hiatus between the launch line-up and the second wave of software. A (very) brief dalliance with *Jet Set Radio Future* helped fill a small gap early on, but summer provided the usual software drought. Though,

few hours playing annoying Americans at *MotoGP*. Six long, tortuous and expletive-filled hours later, I was still none the wiser. I called the Xbox Live help line. I called the ISP helpline. I even called the people who sell the broadband adaptor. After hours of trawling the Web, reading and re-reading user-group posts, I finally, and fortuitously, had a

Of the three current-generation machines, Microsoft's has been my favourite so far – although the summer has been an unsatisfying time

stroke of inspiration moments before giving up and hurling it all out of the window.

(Of course, your Ethernet hub needs to be set so that it can dynamically assign IP addresses – which I seemingly managed by typing in suitably IP-address-looking numbers. By the time I went back into the other room, the Xbox was already logging on – since then, it's been utterly painless.)

Xbox Live hasn't really improved by X life, though. I'm not the best videogamer in the world and so anything that involves combating other humans results in my status deferring to that of cannon fodder. I fare better in racing games, but so

of *Ghost Recon: Island Thunder* and *Knights Of The Old Republic* – which looks astounding. By the time you read this we should be well into the mad dash towards Christmas, and spoiled for choice, as usual.

With PS2 past its prime and GameCube looking shakier by the day, I'll be sticking with Xbox

for the foreseeable future; there are enough AAA titles in its release schedule to justify not owning the other two machines.

Also, I think next year we'll see a much more even playing field, where Xbox gets just as many key exclusives as PS2 – if not more.

So the course for 2004 looks set. And by year's end no doubt the big three manufacturers will each suffer a nasty case of tech-spec leakage and we can start the whole sordid process all over again.

See in you **Equip 2** – some time during 2006, maybe?

Steve Jarratt was the launch editor of *Edge* magazine. He is a senior editor at Future Publishing Ltd.

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Microsoft
game studios



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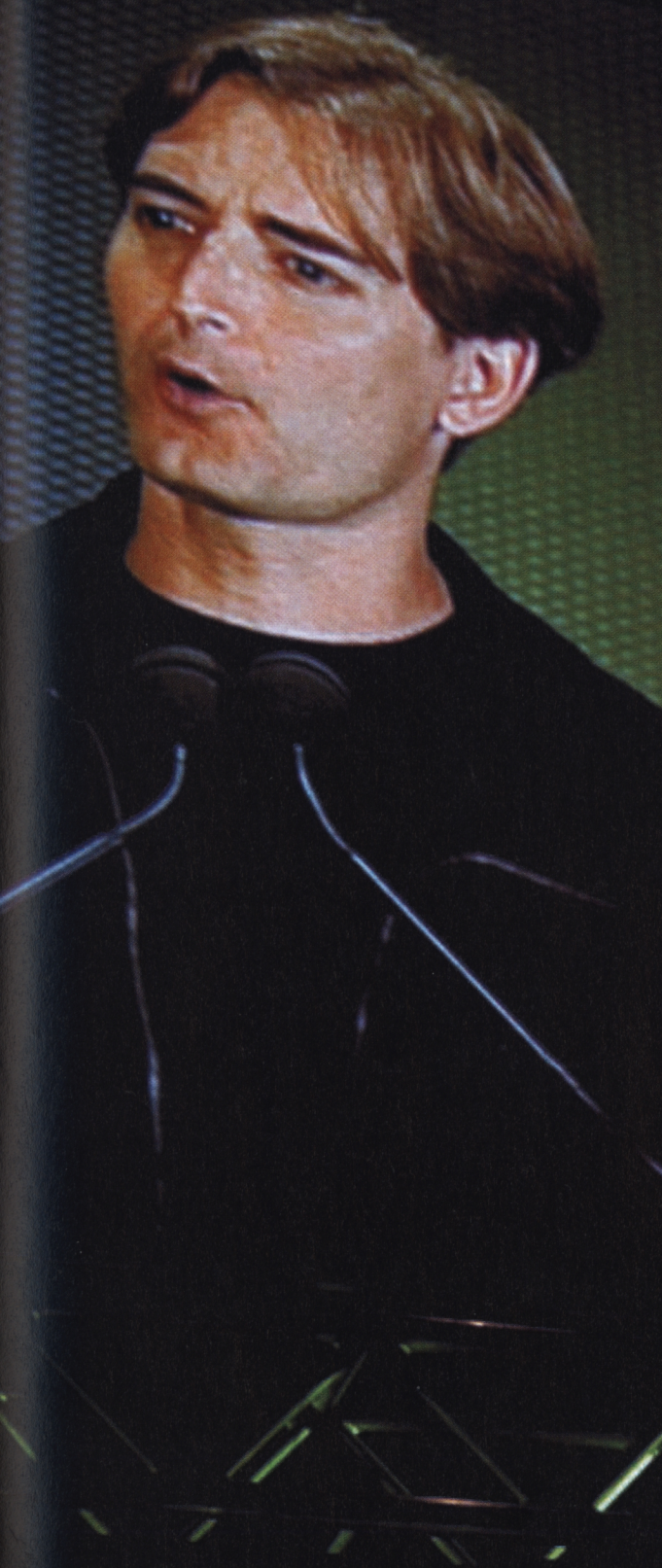
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Interview:

Ed Fries

The man wielding Microsoft's money mountain for the Xbox cause is repositioning the console as something suitable for kids, believes in 'patient capital', and knows that a great modern-day game takes both stupendous effort and time to create. So, where's the hype?



As far as in-house corporate commentators are concerned, **Equip** has so far taken up the relevant hardware issues with UK representatives, with both Phil Harrison and David Gosen standing fast for their respective systems and the role they play in the isosceles triangle that is the current videogame market. But when the opportunity arose to speak with Microsoft's **Ed Fries** (pronounced 'freeze', if you were wondering) at the recent X03 event in Nice, such homegrown concerns vanished.

Proponents of corporate America are infamous for having the hyperbole and deflective properties of a war minister, but **Equip** found only minimal solipsism from Microsoft's corporate vice president of games publishing. He seems comfortable riding the wave of Xbox's continued success without evangelising his corporate

line like so much harmless and unquestionable nursery wallpaper. Well, mostly. He doesn't concede that games are complicated, costly conundrums to make; he promotes the fact. But he does quickly shun the complimentary copy of PlayStation2 issue of **Equip** we've brought along to offer him, maybe in case we have some paparazzi lodged in the potted plant in the corner of his makeshift meeting room, waiting to snap him kissing Sony's baby.

What are your responsibilities at Microsoft right now?

I run Microsoft Game Studios, which

Do you have a final say about whether a game gets to be made or not?

Yeah. I approve every game that we start, and I sit down with the team about three months before it ships and we have what we call a 'Go/No Go' meeting, which is a pretty serious event for us, takes a couple of hours. We go through the game in a lot of detail, all the disciplines. We decide if we're really going to commit and have the game done in three months down the line or not. Sometimes, after coming out of those meetings, we decide to make pretty big changes to games. Sometimes we'll hold it back for another six months, to improve the quality of it. Sometimes we decide that we're not going to make it at all.

Can you explain this idea of yours called 'patient capital'?

The philosophy I've followed since I started with the games group around seven years ago is to team up with the world's best

developers, and give them the time and resources they need to do great work. If you think about how I can offer an advantage relative to other publishers, I think one of the biggest is that I do not have as many quarterly pressures as they have. We don't have to get the game out for that quarter, and we don't have to get the game out for that fiscal year. Fortunately, even though my business is big, and has enormous standards, it's a small part of Microsoft's business, so that translates into more leeway in the process, which is what patient capital is all about.

And how patient is that capital, exactly?

Well, it's not infinitely patient [laughs].

Say Bungie wanted to delay Halo 2 by six months, for essential maintenance. Would that be possible?

Y'know, it's all about making sure that we have a great game, because that's the most important thing. At the same time, you can make too much game. We've done that in places as well.

What games would you say you've done that with?

Well, a good example of that would be *Dungeon Siege* on the PC. It had about 50 hours singleplayer, then about 60 hours multiplayer, and it was never meant to be that big. I think the team got a little carried away, and I think it would have been better to ship that game a little sooner and a little smaller.

Have you done that with any Xbox games yet?

Ummm... none are springing to mind, but then there are those games that haven't shipped yet, so maybe those are ones with too much in them.

Is there an Xbox Live policy with regard to any games coming to Microsoft, in that every game has to have some aspect of Live – even if downloadable content – before it'll be considered?

We don't have a policy like that. I don't think that it makes sense for every single game to have Xbox Live support. *Grabbed By The Ghoulies* is an example of game shipping this fall without Live support, and we're fine with that. For a lot of games it make sense, though.

Do you think the Xbox game catalogue is lacking in any particular genres?

Well, traditionally, the answer to that would be RPGs, but that's really changing, with *Knights Of The Old Republic* out there – which is just a fantastic RPG from some of the best RPG makers in the world. It's just launched in the UK and it's been the first time that Xbox has been number one in the all-formats chart. Of course, we have others coming – from Climax, we have *Sudeki*, and obviously Peter Molyneux's *Fable*, and for some reason they're all UK products.

There's just something about the UK and RPG's just now, I guess.

Something I've been asked a lot about is a football game, an online football game at that, for Europe. Obviously we've got *FIFA* coming, but there's no online game as yet. So that's something we need to address, for sure.

There was a rumour going round quite some time ago that Microsoft had its own online football game in development, along the lines of online tennis title Top Spin. Any truth to this?

No. That's really not true.

Is there anything to announce regarding the ISS series?

I've spent a lot of time with Konami. I've known the head of games at Konami for quite a few years; we first worked on the PC port of *Metal Gear Solid*, long before Xbox. We talk all the time, and they're going to be supporting our platform a lot more in the future, but I can't talk about specific games at the moment.

How important is Vice City to Xbox, and what did you have to do to get it on to the console?

Well, we didn't have to do a lot. Take Two has been a great partner with us, they've brought a lot of great games out. The *Midnight Club* series was a great line, and they really wanted to support us. So they went back and renegotiated their deal with Sony, so that they could release it on Xbox. Obviously we're very excited about it, and we know we'll have the best version. And having both games together for one price this holiday is great.

Do you have any idea about the price? There have been suggestions that it'll retail at well over the RRP norm.

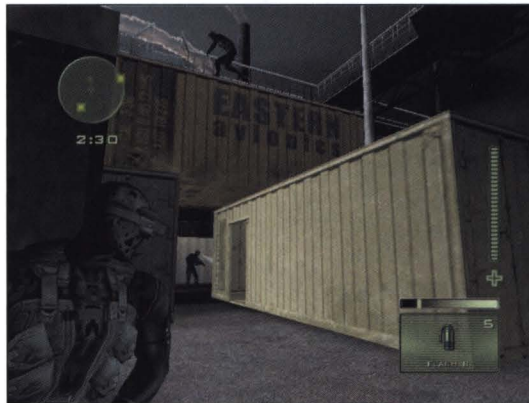
Can't say, sorry.

“It's all about making sure that we have a great game, because that's the most important thing. At the same time, you can make too much game. We've done that in places as well”

includes our firstparty team on Xbox as well as our PC gaming business and the online MSN games. I'm also responsible for thirdparty relationships with other publishers on Xbox.

What would account for a typical couple of days in your job?

They're all a bit different, I suppose. I work with our internal studios, I spend a lot of time with the respective managers who run each one, and I'm involved with starting projects, finishing projects and projects in between. Everything, really. If I've got any free time, I'll spend it with projects that aren't messed up.



Ed Fries's division has been responsible for signing up many games for firstparty release, including the upcoming (clockwise from top left) *Crimson Skies*, *Rallisport Challenge 2*, *Counter-Strike*, *True Fantasy Live*, *Voodoo Vince*, and *Top Spin*. The other title pictured here, *Splinter Cell: Pandora Tomorrow*, is not a firstparty game, but it will no doubt be one of the most important Xbox releases next year



And are there any other games on rival consoles that you wished were on Xbox?

I'd like Konami's *Metal Gear Solid 3: Snake Eater*, please.

Xbox 2 – is it going to be backwardly compatible?

I have absolutely nothing to say about any future Xbox versions.

Not even about the concept of forwards compatibility?

No, I'm saying nothing about any future hardware. That's going to end a lot of your questions, I guess [laughs].

Looking at the whole Xbox picture, what aspect would you say has been the most successful?

I think the area with the biggest innovation has been Xbox Live. We created the largest broadband subscriber service in the world, and we really think we're at just the tip of tapping an audience. We're going to grow quite a bit next year, as we release more exciting products.

What are your plans for Xbox next year?

Xbox Live is going to continue to evolve. We just brought out a whole new bunch of features for Live – Live Now, Live Alerts – so you get to see Live through your PC, and get to find your friends through your mobile. For next year, a lot of it is tied to the release of *Halo 2*, and more organised events such as tournaments, and more support for clans.

A lot of titles are clustered around March/April next year. Is that because games have been delayed, or you want to wait and get a lot of new gamers on board at that particular time?

Games are getting bigger and harder to make. Something like *Halo 2* has had a team of 50 people working on it for two years now, and that's just to make a sequel, so it's a big, complicated project. *Halo 2*, actually, is on its original schedule. When we announced the spring date, some people thought it was a slip, but it has actually never been scheduled for anything but spring 2004, the first date that we ever announced. It's just that they're trying to do very ambitious things, and it takes some time to do that. Another example is Peter Molyneux, and *Fable*. Peter Molyneux is like the king of ambition in games, he's always trying to do something far more advanced than anyone else, and it takes time. So you have to be patient.

So it's not just marketing strategy?

No. There's a Web site that had an article up the other week about how we were holding back *Halo 2* purposely, and we were all laughing about that. I'm afraid that kind of deliberate delay doesn't happen very often. Typically in this business, there are certain natural points that games slip until they hit, and then they stop slipping. Xmas is one, games tend to pile up at Xmas, but this year a lot of thirdparty publishers see March as their natural date, because that's the end of their fiscal year. But the end of the fiscal year for my group is June. So, to make my numbers for this year, *Halo 2* would have to launch before the end of June, not March.

Can you be more specific when you say that you expect a large number of new subscribers to Xbox Live?

We've got around half a million subscribers right now, worldwide, and we should be over a million by E3 next year. We have some big releases this holiday that should attract a lot of new subscribers, especially when *Halo 2* comes up; that's going to

Do you think Sony can catch up at all in terms of online?

It's pretty difficult for them to catch up. A lot of the things we've done with Live take advantage of ideas that were built into Xbox from the very start, so the fact is that every box is ready to hook up to the network, and there's a hard disk in there too. And then there's the way we've structured the service, so that there's only one login for every game, you can always find your friends easily if they're on, and you only get one bill in the mail. It's one unified service. Sony have created a divided service where there's lots of different fragments, and they're trying to group some of them together, but with limited results.

Are there any plans to introduce a Live billing service that's not dependent on a credit card?

We are exploring other options, definitely. In the future we'd like there to be lots of ways to pay. In fact, in Asia, one of the best ways to pay is through your cell phone, so we're looking into those kinds of methods, as well as pre-pay and the possibility of going into retailers and buying subscriptions that way too.

And what of EA, and its current reticence towards Xbox Live?

I'm very involved with those discussions, and am meeting with Electronic Arts almost every week. We talk about Xbox Live, and their participation in the service. I'm very optimistic about them getting involved sometime soon. They've been a big supporter of the platform so far, they're actually one of the top publishers for Xbox in general.

“Games are getting bigger and harder to make. Something like *Halo 2* has had a team of 50 people working on it for two years now, and that's just to make a sequel. It's complicated”

And is there a price drop looming?

At Microsoft we've always said that we wanted to keep our console competitive. We're happy with the price we have right now in the market, but we won't be afraid to match any announcements on behalf of the competition.

bring a lot of new people online.

And what about Europe?

We're just getting starting here, with about 50,000 subscribers, which makes it the largest broadband subscriber service in Europe. I think that our success here has only really been bound by the broadband infrastructure. We're working closely with telecomms in Europe, not only to develop Live, but to increase the speed of broadband.



Where do you see Xbox going in the future?

We're doing a lot of planning for the future right now, about where gaming is going and what capabilities we need to provide. Evolving the hardware, and even more so the software. I'm going to be giving a speech later today [at X03] to a lot of the top publishers in Europe, and I'm going to talk about how it used to be that the platforms were defined by the hardware – in the 8/16/32bit eras – but more and more these days they're being defined by the software. Things like Live, billing, client servers, authentication – all this software that sits on top of the platform. More and more innovations are coming from the software side. Which is good thing for Microsoft, because that's what we do. Those of us on the Xbox team can look around the company and tap in to great software projects that are happening, and think how can we take that and adapt it to work in our space.

Are you planning anything along the lines of EyeToy? A new piece of hardware, maybe?

We have nothing to announce about that. I understand it's selling quite well here in Europe. I haven't had the chance to spend much time with it, though [laughs]. There's nothing to play, but people are buying it anyway, right? But we have to be careful in this business, that we don't get a little in-grown. There are people in the business like myself – who've been around a long time and are used to making the same games, where we just find ourselves doing more of the same – then someone comes in and does something that makes you realise that there's a definite opportunity in there to reach a broader audience. Sometimes we come up with those things, sometimes our competitors come up with those things. I'm always a fan of those things, which means that we can grow the videogames industry and reach more people. I think our competition is just as much with movies and television, too.

How successful would you say Xbox has been in Japan?

Not very successful [laughs]. Is that trick question?

No. But it does lead on to the following question: do you think you need the hardware to succeed in Japan for Xbox to be a success?

It's interesting, y'know. If you would have asked me that a couple of years ago, I would have said, "Boy, if we're not

"Once, I would have said, 'Boy, if we're not successful in Japan, we're really going to have trouble getting thirdparty publishers there to support us'. Now, in fact, almost the opposite is true"

successful in Japan, we're really going to have trouble getting the thirdparty publishers over there to support us." In fact, almost the opposite is true. They're supporting us more than ever, and it's because of the success that we've had in the US and Europe. The whole Japanese game market has been shrinking, and so the Japanese game publishers are now having to look outside Japan to be successful.

The two biggest success so far on Xbox have been non-console developers who have shifted across to Xbox – Bungie and Bioware...

Yeah, I think they're changing the whole face of console gaming.

Do you think there could some kind of 'Iron Curtain' of development forming between the east and west, as the Japanese become more insular and retract to focus on their home territory, and the Xbox becomes the console of the west, driven and bought exclusively by western developers and consumers?

I don't think anyone wants that. I think the Japanese are trying really hard to understand what's happening with western gaming, because they want their games to be more successful here.

Do you think there's such a thing as a 'Microsoft' game, as in there is such a thing as a 'Nintendo' game?

There are some things that I think are really important in a game, and that I push to all the teams. They don't always listen to me,

How much do you value Rare? And how happy are you that it's launching with a game that isn't a recognisable IP?

Very happy, just as happy as them.

Do you not think it would have been better for them to debut with something such as *Perfect Dark Zero*?

We certainly have plenty of time and

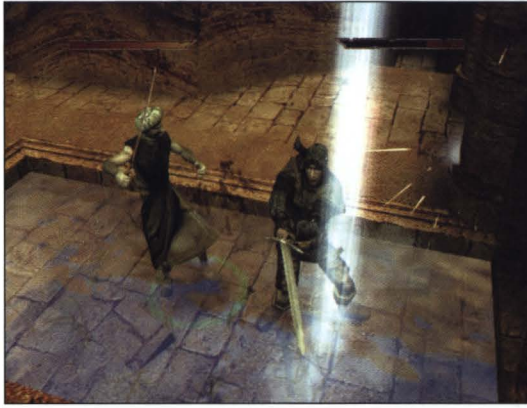
opportunities to bring out sequels to classic Rare games, but one of the most important things about someone like Rare is that they can create new franchises as well, so I absolutely support them in that. I think it's great.

Does that mean, then, that you're tending towards more cinematic games rather than the abstract characterisation that Japanese developers can lean towards?

Yeah. I'd say it means that, ultimately, I want to compete with the other forms of entertainment. I want to compete with movies and television, and great books and plays. I want there to be great games that are looked at 50 years from now, almost as a form of literature in all this. That's what I think is the future of the business, and until we take that kind of thing seriously, I don't think we're really going to be able to compete with the other forms of entertainment.

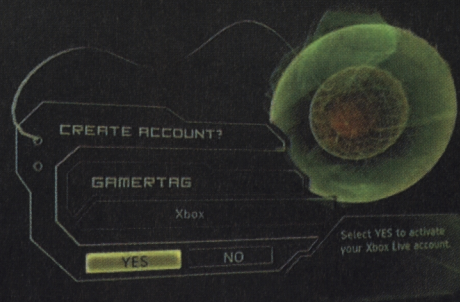
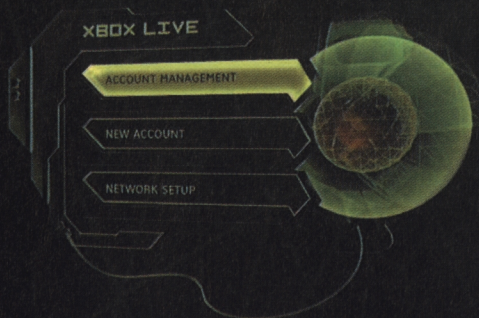
How do measure the value of an event such as X03, considering the amount of money that's gone into it?

This, for us, is our one big European event. We don't participate in ECTS. Our German subsidiary did something recently, but that was just specific to that market. So, this is our one time to talk about what's happening, and really spend time with everybody here, so it's really very important.



Fries remains bullish about Xbox's potential next year. Games driving the thirdparty push will include (clockwise from top left) TDK's *Knights Of The Temple*, Kemco's *Rogue Ops*, Tecmo's *Dead Or Alive Online*, *Drake and Blow Out* from Vivendi, Sega *GT Online*, Capcom's *Steel Battalion*, *Line Of Contact*, and *Deus Ex: Invisible War* from Eidos. Clearly not all are bankers, but there are some juicy prospects



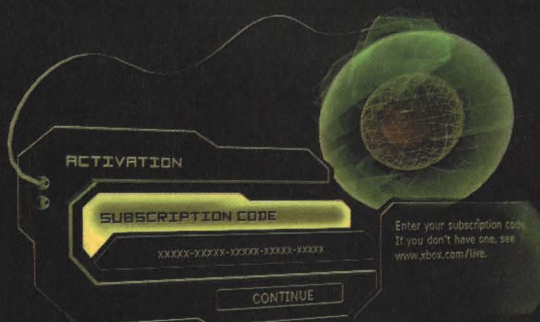


Live performance

Equip takes a look at Microsoft's great hope, online gaming

Microsoft has already found its place in history. Whatever the state of play may be in two or three hardware generations' time, the company will be remembered as the company that made online console gaming a realistic proposition. But it wasn't the first. In October 1999, the Dreamcast famously launched in the UK with an inactive online service, reducing its claimed 6bn players to a rather less impressive four. Still, Sega did eventually claim the first truly successful online console game in the marvellous *Phantasy Star Online*. Microsoft has taken that game along with Sega's ambitions and made them work. Well, to a point.

The facts and figures on the Live service since it went live in March 2003 make for mixed reading. There are currently only 11 countries on the Live network and only 50,000 European Live gamers signed up to the service. With Microsoft's relative US successes brought into the



equation the picture looks far rosier. Worldwide there are 500,000 Gamertags and some 15m individual game sessions a week, with one million of these played in Europe.

Microsoft continues to push the Live message, making it the undoubted centerpiece of the recent X03 show. There are some 100 Xbox Live-enabled games expected by Christmas 2004, along with six extra European countries on the Live network. But although support for Live is growing both from Microsoft itself and among the development community, not everyone seems convinced, with EA particularly notable by its absence.

Looking for updates

The change from PC to console online play has unsurprisingly been led by PC conversions in traditional genres, but there is clearly the opportunity to form entirely new methods of play for this new audience. Because there are currently no truly great titles in the standard genres – FPS, racing, RPG, sports – the race among developers right now is to provide the best in each of these. Once they are taken, it will be down to software houses to convene in their most dependable thinking caps and set about using this new technology and new demographic to create new ways to play.

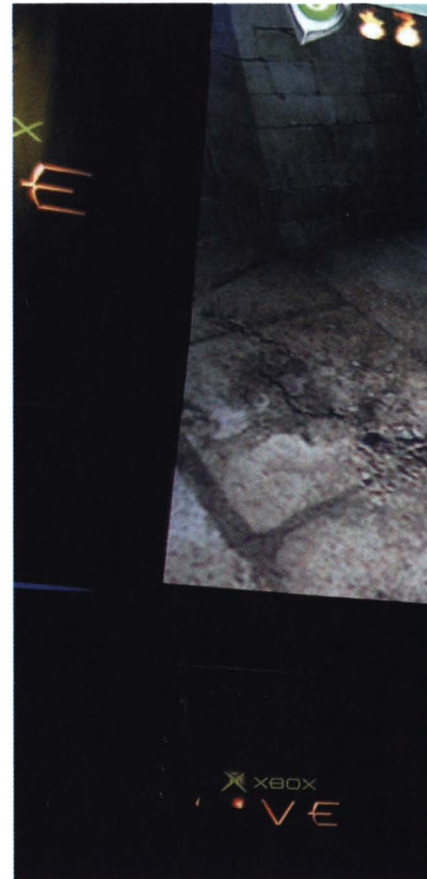
Sandbox games like *GTA* head up the wishlists of gamers the world over, leading developers to be the creators of playgrounds rather than rules



It is impossible to guess what might come of a massmarket online gaming network, but there are clues in surprising places. The success of *Midtown Madness'* playground games in cars points to a more freeform mode of play; sandbox games such as *Grand Theft Auto* head up the wishlists of gamers the world over; and it is easy to see the job of future developers to be the creation of playgrounds rather than rules.

Downloading

One distinct advantage of online consoles is the ability to update services without the need for any client-side activity at all. Many have been concerned about the thought of patches for console games and while this has happened, the dedication of Microsoft to keeping the whole connectivity issue as



transparent as possible makes the process less a bugbear and more a welcome boost. Epic's firstperson shooter *Unreal Tournament* was the first title to receive a patch to address technical issues rather than extra content and the consequential increase in framerate raised the title from nearly unplayable to vaguely smooth.

This also applies to the dashboard itself, which has just been updated to Live Now, allowing players to communicate from the dash itself. Free worldwide voicecalls is a not-insignificant advantage to the latest iteration of Live and when it also allows you to see which of your friends are online, what they are playing, and invite them into games, this is clear indication of the kind of totally transparent system Microsoft is aiming at. Games such as *MotoGP2* and *Project Gotham Racing 2* also automatically log into Live, even when the player is indulging in solo play, automatically updating hi-scores and lap times, allowing the player to see their standings in both the world and among their friends – all automatic and invisible.

There is little doubt that the eventual intention is to make the Live service as much a part of the Xbox experience as the joypad – an essential and omnipresent tool to allow players to get together as quickly and easily



The Japanese game industry is keeping a close eye on Xbox Live, with Microsoft soon to introduce key title *TFLO*. Functionality with other consumer tech has also been emphasised





as possible, and developers to fine tune their products to the desires of their customers. At this stage it appears that Microsoft's dedication to the holistic Live service seems to be nearing this sort of state far faster than Sony's piecemeal free-for-all approach.

Signing out

The online console gamer market is still a new one. While Microsoft cannot hope to turn any kind of significant profit on its exploits during this hardware cycle, its efforts



Microsoft's Peter Moore recently attempted to place emphasis on XBL in Japan, but it'll take more than *Ninja Gaiden* to make it a success

Microsoft and Sony's aim is to make sure that, as the uptake of broadband increases, it's their product that's seen as the service of choice

to ingrain the Live name into the consciousness of current gamers must surely reap profits when the battle lines are redrawn and the hardware wars recommence in earnest.

There is little doubt that cheap, fast broadband access is the biggest hurdle in the path of massmarket online gaming but that is very much out of the control of the major players in the hardware game.

Their aim is simply to make sure that, as the uptake of broadband increases, it is their product that is seen as the service of choice.

While consumers may buy Sony products in their droves, if Microsoft can make its name synonymous with online gaming and online gaming becomes the gravy train the entire industry is banking it will, it will no doubt see itself making up significant ground on its Japanese competitor.

It isn't in the game

There is, of course, much debate over the whys and wherefores of EA's distinct absence from the Xbox online party. The official line is impenetrably vague and uninformative but it is safe to assume that issues of control are at the centre of this corporate disagreement. Neither EA nor Microsoft is willing to comment on the subject with any degree of candour but a few behind-the-scenes whispers indicate that the centre of the disagreement is the refusal of Microsoft to allow EA to run its own servers on the Live service.

"Electronic Arts wants to switch off the servers with each new iteration of its games in order to force players to upgrade," claims one anonymous, prolific game developer.

"Microsoft wants to keep full control over the Live service and is strongly opposed to giving Electronic Arts this kind of autonomy. Basically this is a war of attrition – it just remains to be seen which side will break first and with neither party used to compromise, gamers may well be in for a long wait."



FIFA 2004, Medal Of Honor: Rising Sun and Need For Speed: Underground: all coming online to a console near you soon. But only if it's Sony-badged

Living it Live: the most significant games on Xbox online

Here, **Equip** casts a critical eye over the games that shape the current Live landscape (this page) and takes in a few of the titles most likely to keep Xbox owners fixed to their sofas over the coming months and beyond (facing page).

Return To Castle Wolfenstein



A well-handled conversion of the PC game, this title is the nearest to the sort of polished arcadey deathmatch fun Xbox Live is crying out for. There is still an emphasis on teamwork, with players adopting various roles and working together to achieve simple objectives, but this is, for the most part, a fairly standard FPS mash-up.

Phantasy Star Online



The Xbox conversion of the precursor to XBL is perhaps somewhat inferior thanks to voice chat replacing the text conversations of the original. How can one pretend to be a cute Japanese schoolgirl when the illusion is instantly shattered by the booming tones of a Hull carpenter? But this is the only Live-enabled RPG and so remains the only choice for the Xbox owner in search of adventuring companions.

Ghost Recon: Island Thunder



An update to the well-received *Ghost Recon*, *Island Thunder* is effectively an expansion pack for the original title. The advantages are that it works as a standalone package and that it was released at only £20 (although you can pick it up for as little as £15), making it an extremely attractive proposition to old hands and newbies alike. Tense atmosphere and unique sedate pacing make this a highly enjoyable title for armchair soldiers.

MotoGP



More popular than its superior sequel thanks to its inclusion in the demo disc shipped with all Live starter kits, the only pure racing game currently on the Live network is a highly enjoyable title. It has been wracked with cheaters, both in the sense of shortcuts, bug-exploiting lap times and groups of giggling pubescents blocking raceways and driving the wrong way around the track. For pure racing fun, however, this is currently the most popular Live title.

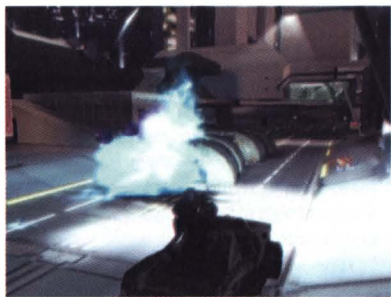


Midtown Madness 3



Microsoft's own brand of automotive mayhem weaved a spell with comical smash-and-grab and hide-and-seek. It points to a future of online gaming away from traditional genres – despite being a car game, the knockabout cops'n'robbers-style gameplay requires human interaction to work – what seems dull and repetitive against AI suddenly becomes a revelation in fun, genuinely amusing play, and at the same time, far less competitive than the majority of titles.

Halo 2



Top of the wishlists of Xbox owners around the western world, this title has more riding on it than any other in the Microsoft stable. Bungie has made extravagant claims about the Live aspects on offer, stating in no uncertain terms that it will redefine the online experience. While such bold assertions are both wholly predictable and impossible to credit, there is no doubt that something very special is expected from the premier Xbox development team.



Project Gotham Racing 2



Preview code is now available and there's a general murmur of approval spreading from those who have sampled the Liverpool-developed über racer. Since the Live service first opened its portals, there has been a constant desire for a racing game in the traditional sense as apposed to the unHINGED action of *Midtown Madness 3* or the two-wheeled mayhem of *MotoGP*; *Project Gotham Racing 2* looks certain to fulfill this need in some considerable style.

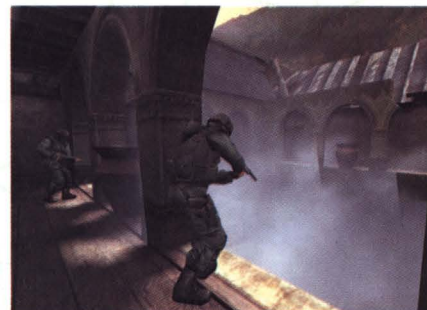
Top Spin



Virtua Tennis is still looked upon as the top tennis game of all time and is unquestionably the benchmark other titles are measured against. What has been seen of *Top Spin* suggests that it can not only bear these comparisons but possibly exceed them, all the while with full Internet play. Graphically sumptuous and with the ability to create fully customisable characters before launching into the Live arena, this looks to be every inch the modern online console offering.

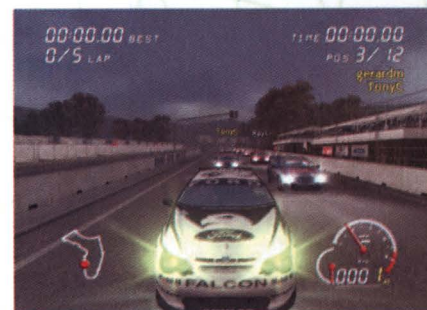


Counter-Strike



The PC legend will finally be breaking on to Xbox and taking hostages at the tailend of the year, if Ritual's latest claims are to be believed. For many, the idea of a stable, cheat-free environment in which to practise the art of counter terrorism is a dream come true. Issues still remain around the tender subject of the control method but those not chained to a mouse and keyboard can expect a fantastic experience.

TOCA Race Driver



Perhaps the most humble title on this list but potentially both interesting and commercially successful. This is essentially the already-released game with full Live support and at a reduced price. Both this title and *Island Thunder* have pushed the price point of Live updates down to what many consider to be a more appropriate level for most releases. It will be interesting to see how they fare.

Where next? What game developers say about Live

Creating an online console game can be an altogether different proposition than a typical title. **Equip** spoke to three developers currently big on Live support to find out more



Olivier Berteil
UbiSoft's *XIII* dev studio

Olivier Berteil, XIII dev studio, UbiSoft
Live still has a fairly small uptake as a proportion of Xbox owners. What significance do you feel Live compatibility has to a title's success, in comparison to both other Xbox titles and to cross-platform offerings?

Well, I think that right now, most PC games played via the Net (FPS and strategy games), are not as exploited on consoles. With the increase of FPSs on consoles, I think that the Live part will be an important part of the success of big titles. And as it was on PC some years ago, the Live part will increase the interest in new RPGs on consoles.

How does the increase in the number of games using Live affect the chances of games offering system link options? Do you consider system link alone to be a selling point?

For developers, it's true that both features are linked. I think that even if the system link is not the most important selling point, it's very important for us to offer both systems, because it's always fun to play with a lot of friends in the same place.

Putting Live compatibility into a game obviously requires some investment of time and resources. What percentage of development time is given over to implementing the Live aspect?

"I estimate that during the making of *XIII*, the Live development code has represented 20 per cent of our engine development time"



Martyn Chudley
Bizarre Creations

A lot. We have to admit that the Live portion has taken more time to develop than we thought at first. I estimate that on *XIII*, the Live development has represented 20 per cent of our engine development time, and most of all, 50 per cent of my ulcer [laughs].

Internet play is often quoted as the single biggest factor in the future development of the videogame industry. Is your heavy investment now an indication of your belief in this trend?

Well, even if the Internet play is surely one of the biggest expectations from players, I think that the solo part of the games will continue to be an important part of game development. Except for some rare exceptions such as *Counter-Strike*, players always ask for both parts – solo and multiplayer features.

Downloadable content is a new concept, but UbiSoft's support for it has been unprecedented, with whole new levels for *Splinter Cell*. Why have you given it so much support?

It's important for us to make our game live through time. If legendary games like *WarCraft* or *Half-Life* have been working well for so long it's because developers have taken time to offer new features to players.

It was a sort of premiere for *Splinter Cell* because it was one of the first pieces of downloadable content on a console. I think we will continue to assure the future of our games with downloadable content, and if it's only for one reason, well, it's just that players always want more of their favourite games.

Most online games are restricted to popular genres, such as FPSs, sports games and driving games. Where can you see online gaming being taken creatively? What about new genres for online games?

We are only at the beginning of online games right now. Maybe because *Quake* and *Doom* were so popular ten years ago, FPSs are now the most played games on the Internet. But we can't forget the explosion of massive roleplaying games like *EverQuest*, games which were created for online use first. I think that game designers will find new concepts in the next years, based on the utilisation of online.

Martyn Chudley, Bizarre Creations

What significance do you feel Live compatibility has to a title's success?

I really see *Project Gotham Racing 2* more as a product helping to promote Live and take the whole online experience forwards, rather than be used as a marketing 'hook' for the game itself.

Through our complete integration of the Live system within the singleplayer experience (every challenge in the singleplayer game is tracked online – I think we have over 2,000 independent scoreboards) it allows the player to immediately see how good they are relative to the rest of the world, and more importantly, their friends.

We haven't simply got a generic head-to-head racing online implementation; it's more about extending the singleplayer experience. Now instead of needing 5,000 kudos to beat the challenge or a 1'20" lap time, it's more important that you beat your friend's best. And this is something that has been sadly lacking in titles until this point, so hopefully we can pave the way forwards for other titles as well.

Do you consider system link alone to be a selling point?

We have implemented a system link option purely because it made absolute sense given the robustness of the Live system and its closeness to the system link code.

Personally I feel that system link on its own is not a huge selling point – I would not be more tempted to buy *PGR2* because of system link, but with all of the Live integration, that is obviously a completely different matter as it truly changes the nature of the competition and the motivation for playing.

What percentage of development time is given over to implementing the Live portion of a game at Bizarre?

Given the level of support that Microsoft has put into the entire Live system, we have only really had to have a small amount of resources dedicated to it. Essentially we have only had one full-time developer, and limited time from the physics and user-interface coders to integrate the whole experience, so commercially and gameplay-wise this has made huge sense for us.

Internet play is often quoted as the single biggest factor in the future development of the games industry. How strong is your belief in this?

Personally I believe that there is a time and a place for Internet play, but I don't think it will ever replace the fact that gaming is traditionally a very personal experience.

People like to be set challenges, and it is then down to that player's skill and ingenuity to complete that challenge. As soon as you go up against other human players in an online situation, the nature of the challenge changes. It becomes a lot more personal.

However, you will still have massive satisfaction to be gained from solving a complex puzzle, defeating an end-of-level baddie, or simply completing a game of *Tetris* or *Patience* completely without the need for human interaction.

How do you intend to support downloadable content in the future, and where do you see the benefits on the publisher/developer side?

I'm not sure of the benefits to the publisher or the developer, but to the consumer it means that games can remain fresher for longer, and that their value for money for the product can be extended. Granted, the arguments will always be "Why not ship with the extra content in the first place?" but there are obvious time benefits (downloadable content can be created

after a game has hit the shelves), and the nature of the content can react to what the players *want* from the game (via their feedback from playing the title). Give 'em what they want, not what you think they want!

Microsoft's insistence on all Xbox online games to be run through its Live service has been a financial constraint too far for some publishers. What are your feelings about the issue of pricing for online gaming and content?

To be honest, as we are working as a firstparty title we have not come across any issues. I think that the charges being made for the Live subscriptions are extremely fair, given that they are opening up an entire community of games – not just access to a single title.

Essentially your online 'profile' moves with you from game to game, and so will your friends (and enemies), and this is more of what the entire Live experience is all about – not just a one-off game.

How do you think Microsoft is positioned against Sony in the forthcoming online console wars?

I think that looking at the two online strategies, Microsoft is the strongest placed by far. By giving the Live 'umbrella' across all Xbox games it makes the way that each game is accessed an extremely consistent experience for the consumer, whereas the per-title approach from Sony could end up giving the end user a bit of a hit-and-miss experience, which is down to the actual implementation from the individual developers.

Most online games are restricted to popular genres, such as FPSs, sports games and driving games. Do you think there will be entirely new genres built solely around the online arena?

Hopefully we have shown how Live can be extended to 'traditional' challenge-based gameplay through our implementation in *PGR2*. Essentially this approach can be used by any score or reward-based game, and I'm amazed that no one has taken advantage of this before.

Basically people love to see how they stack up at *anything* compared to the rest of their mates, and online can give this experience. It's just that until now developers seemed to have mainly concentrated on the 'obvious' head-to-head aspects of online gaming. What we have done is integrated the online and offline experiences into one whole package – with neither compromising the other. You can play one style of play or

the other, or combine the two into an even bigger experience. It's all down to what the user wants.

Max Everingham, Codemasters

What significance do you feel Live compatibility has to a title's success, compared to both other Xbox titles and to cross-platform offerings?

Rather than be a major contributor to its initial success, Xbox Live compatibility will help extend the shelf life of a game and keep it in the public eye for longer. As a company, Codemasters greatly values the community of gamers who buy and enjoy our titles and their 'word of mouth' support in this respect is very important to us.

Do you consider system link alone to be a selling point?

If a game has Xbox Live compatibility, system link compatibility is easier to implement, and vice versa. But while it's a lot of fun, research generally shows that system link is not, per se, a selling point.

What percentage of development time do you think is given over to implementing the Live portion of a game?

It depends on the game. Obviously, each individual development team discusses Xbox Live elements at the start of each project and then apportions the time accordingly.

Internet play is often quoted as the single biggest factor in the future development of the games industry. How strong is your belief in this trend?

Broadband penetration in the UK is the issue at the heart of this question: until it becomes easier and cheaper to possess, online play will remain the preserve of the hardcore gamer. The more transparent it becomes, the more likely this area is to grow.

How do you intend to support downloadable content and where do you see the benefits publisher/developer side?

We will support this feature whenever we feel it makes sense for the title. When we launch *LMA Manager 2004* (due late January) players will be able to download a rosters update for any squad changes that happened in the January transfer window. This allows us to maintain interest in a title, build the player's perceptions of value, and give players what they want rather than what we think they want.

What are your feelings on the issue of pricing for online gaming and content?

If the content is valued by the consumer, they will pay for it. There is obvious value, for instance, in content that significantly extends the length of time you can play a game – new tracks in *Colin McRae 04*, say, or new songs for *Pop Idol*. It's like getting a brand-new instalment of your favourite TV show or movie and that's worth paying for.

How do you think Microsoft is positioned against Sony in the forthcoming online console wars?

Currently, very favourably indeed. The Xbox Live service has proven that a robust, reliable and downright fun online gaming service can succeed on a console and Microsoft's attempts to provide a connection package are laudable, but the connection experience needs to be made more transparent still. Microsoft has set the bar in this arena.

Where can you see online gaming being taken creatively? What are your thoughts on new game genres being built solely around the online space?

I think this greatly depends on market demand. Right now, the most successful online games mirror the ones that are most successful in the offline marketplace and they're being played by



Max Everingham
Codemasters

“Looking at the two online strategies, Microsoft is the strongest placed by far... Sony could give users a bit of a hit-and-miss experience”

gamers who have played these games offline.

There may be a market for new gaming genres focused solely on online play, but initially they're likely to split into two very distinct groups: a very small core of dedicated gamers who want very specific gaming experiences and a second, much more casual group of people who will 'dip into' games on the service but wouldn't, ordinarily, spend a large proportion of their time playing games – the *Solitaire* demographic, if you will.

Your decision to release TOCA at less than £40 seems to be part of a swing by publishers towards lower-priced games, particularly in the Live arena, with Ghost Island Thunder and Ford Racing 2 also on the list. What's the thinking behind this?

TOCA Race Driver is a re-release – it's the original game but now with a whole Live mode – and so suits the lower price point; it's also great to encourage Live players to sample the game.



PAPER WRECKERS?

\$350,000,000 for yesterday's men?
It may not be a punchline to everyone,
but Microsoft is most definitely laughing

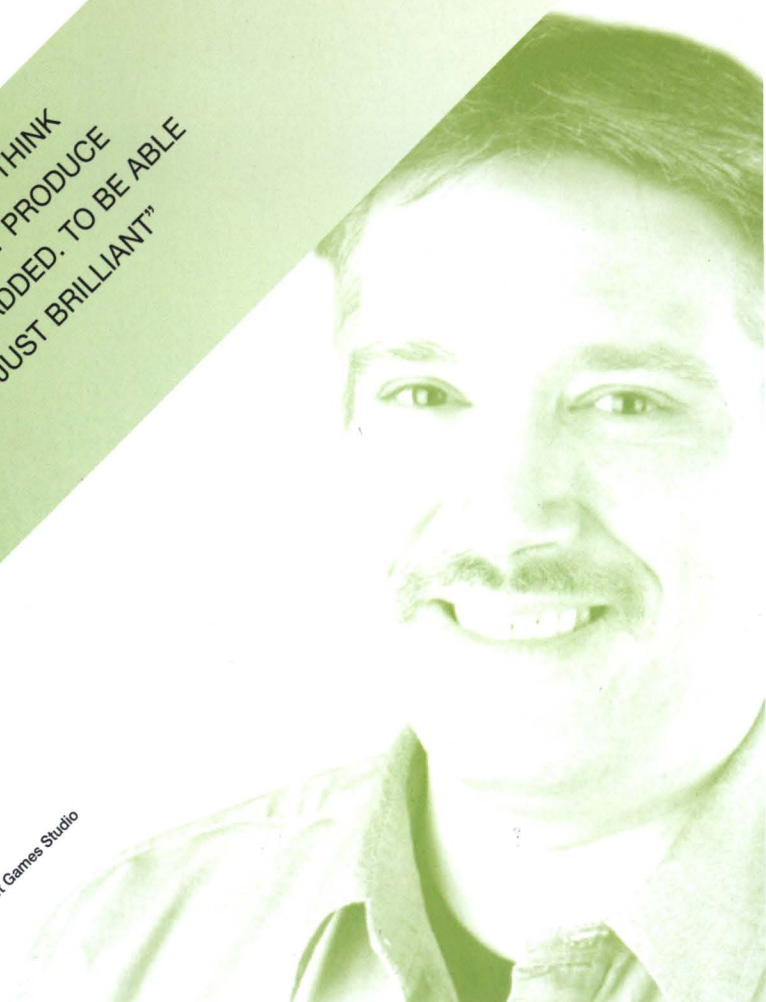


Rare has always been one of the quiet ones. That silence, though, is understandable, and somewhat characteristic. For a company that worked so long and so directly with Nintendo, it has never needed a megaphone to attract gamers to its endeavours. It's just not necessary. And the 2002 circus surrounding their impending purchase by Microsoft – surely an Internet spectacle to jade even the hardest fanboy – meant that everyone who needed to know already knew. The eventual shift to such a robust and visible stable as Microsoft's means that, once again, Rare needn't say very much.

But for a company so reputed for (sometimes) making world-leading video games, such silence is worrying. Well, it's not worrying per se, but such quietude is an empty vessel, prone to accusations of hollowness, and conducive to a lot of noise.

"OF COURSE I WANT HALO 2, I WANT GOTHAM 2. BUT IF YOU THINK BACK THROUGH THE HISTORY OF RARE, WHENEVER THEY PRODUCE SOMETHING NEW, THERE'S ALWAYS AN EXTRA RUSH ADDED. TO BE ABLE TO LAUNCH WITH BOTH KAMEO AND GHOULIES IS JUST BRILLIANT"

■ Ken Lobb, Microsoft Games Studio



It's a vacuum that the game industry abhors, and it needs to be filled, however scurrilous the content. A lot of people are down on Rare, and think that the weight carried by the brand is undeserved, especially given its output over the past few years. Nintendo, it seems, for one. But whether or not *Star Fox Adventures* was a lavish signifier of a company in transition, it's on an intriguing cusp, for both itself and Xbox.

Although, as far as Rare is concerned, it was hoped that X03 would be a sequel to E3. In reality, it was little more than just a DVD extra, a close-up on *Grabbed By The Ghoulies*, and little else. While new footage of *Kameo* was shown, *Ghoulies* was the only playable code at the show, two whole games less than were present at E3.

Rare should be, by all accounts, second only to Bungie in the itinerary of hype. But ask most people attending the extravagant beach party on the evening before the press junket, and you'll hear a number of lips being sucked. *Grabbed By The Ghoulies* is nothing but candied vapour. *Ghoulies* is a commercially driven rush job. Rare has always been overrated. "The games press just aren't going to get *Ghoulies*, y'know? It's meant to be for kids," **Equip** overheard. Ah. Games For Kids. A fractious logic that makes Games For Girls seem like child's play.

The moment the press release mentions a 'younger demographic', alarm bells siren. Such an admission is usually an excuse to palm off over-simplicity and thoughtlessness as valid entertainment. As

any good Nintendo disciple can tell you, the trick is to make games 'for everyone' – or at least say as much. So far, so inauspicious, then.

Believe some reports, and you'll hear that Rare is collapsing slowly under its own weight, with increasingly unhappy development teams trembling like so many ruined muscles. Listen to others, such as **James Veervaert** and **Ken Lobb**, and you'd think that Rare is a definite and significant part of the future of console gaming beyond the Xbox Live evangelism of X03.

Both Lobb and Veervaert are both from the upper echelons of Microsoft Games Studio. No representative of the development teams appears to be present at Rare's X03 press conference slots. James Veervaert is 'business developer' for the Rare Studio. Ken Lobb, formerly a producer at NOA, oversees Rare's output as well as a large chunk of other firstparty developments, including driving games. Regardless, it means that Microsoft is at least willing to make some noise about Rare. So **Equip** asked some questions...

With *Ghoulies* and *Kameo*, are you trying to change the perception of the

Xbox as a mature gaming platform for 20 and 30-year-olds?

Veervaert: Absolutely. That's part of why we wanted Rare as part of Microsoft. They have the unique ability to develop a game to appeal to young players, yet complex enough to satisfy older gamers, so everyone has a great time playing. What we have with them is the opportunity to expand the demographic of the Xbox, and it's going to be the most successful platform because of that fact. We're going to align ourselves with partners who are going to help us create games for all audiences, who can connect then online to play together. Rare absolutely represents the opportunity to gain a much broader demographic.

Is this new target intentional, or just down to the fact that these games were in development for Nintendo, and then shifted across to Xbox?

Lobb: Rare makes games for all audiences, so when you ask if it's intentional, it wasn't part of the purchase, no. If you look at the portfolio of the Xbox from launch until today, we've done a great job of covering games for teen through to thirtysomething owners. At the same time,

maybe you're a 30-year-old and you have a five-year old kid. You have this great system in your house, but what do they have to play? The choice right now is, you could say, somewhat slim. And so right off the bat, *Ghoulies* is the kind of game where you can hand it to a kid, and they're going to have a blast. Plus, people who played Rare games back when they were Play The Game, or later games like *Battleloads* and *Donkey Kong Country* in the '90s, they're all now older and part of the existing Xbox demographic.

Veervaert: One thing I'd like to elaborate upon here is Xbox Live. From Rare's perspective, this helped seal the deal. The Stamper brothers saw this and, they knew it was the future of console gaming. No other company, not Nintendo, not Sony, has this. Microsoft has this vision of the future, and Rare wanted to make games to fulfil that bill.

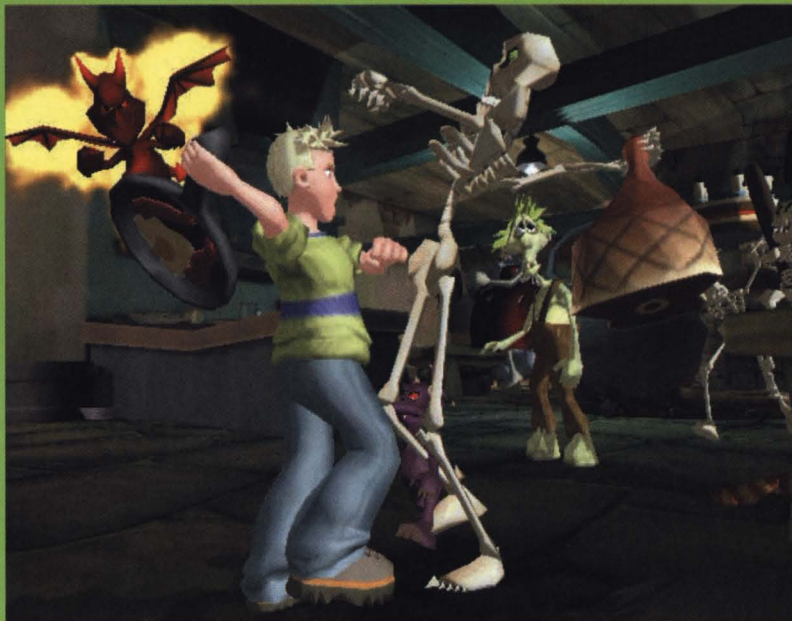
Was this the major reason behind the purchase, then?

Veervaert: The reason for buying Rare is also because there's this incredible bank of IP. These can always be developed upon, as well, later on. Also, the technology base

Grabbed by the Ghoulies

Should you believe the hype and dismiss it as, y'know... for kids?

Release: November



The answer to that question is no. At least, not yet. As Rare itself seems at pains to point out,

there's more to *Ghoules* than meets the eye, but just how much is still hard to tell.

At first grasp, it seems to be a well-produced but utterly functional beat 'em up, using the left stick to move, the right to attack, triggers for camera position, and the A button to pick up objects. Discovering that most of the objects in the environment can be smashed does little to enhance the appeal of what seems to be an ornate lightweight of a game.

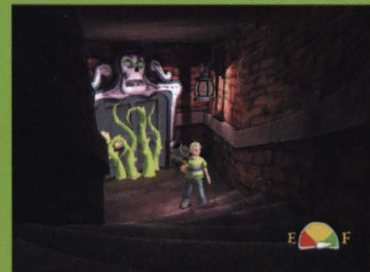
But there's more – certain large objects can be spun around to devastating effect, meaning that your timing is key to wiping out the whole crowd with these unlikely smart bombs. Enemies will use the environment against you, too; a lightbulb appears over the head of any adversary thinking of arming themselves, so you can prevent them from becoming a real danger. In the dining hall, a rowdy clutch of zombie pirates are feasting, and gagging for a fight. It's quite a scrap, but if you focus your efforts on their leader, you'll see mutiny among some enemies who'll turn to help your cause.

As for the things that meet the eye alone, *Ghoules* is an impressive prospect. It's obviously from the same development stable that produced games like *Banjo-Kazooie* and *Donkey Kong 64*, except in a higher gear. Vivid and distinctive, albeit

drawing on a well-worn haunted house scenario for inspiration, *Ghoules* has been lathered in production values.

The storybook framing of the game is reinforced throughout, from panelled cut-scenes to the pause menu. Audio quality, too, is worthy, mostly due to the cacophony of sound effects that emerge from the ensuing brawls. Little spiders, in particular, giggle with maniacal glee. Haunted chairs muffle and grumble as they hop towards you. Zombies guff and groan as they lumber, wailing like monkeys when rinsed with holy water from your super soaker, and will lose a limb if they manage to land a blow on the player. The conservatory is home to a troop of mini ninja turtles who hum the scales when they think you're not looking. And, as with *Banjo*, speech is replaced with an endearing series of grunts and yelps, lending the game much more character than a simple, one-note voiceover.

And is there a complexity here that belies initial impressions? Yes, if you take into consideration the supposed fact that almost every room has some kind of fast-track solution to it. *Ghoules* has grown to show promise, sure, and an extended playtest is more crucial than ever. If it can build on the firm but basic foundations laid down in the opening hour of play, it could blossom into something intriguing – for everyone. If not, well, you know the drill: if you're reading this, then it won't be for you.



Whatever the outcome, *Ghoules* seems like a solid piece of software, rich with detail and polish. Whether or not this will translate any to the gameplay is yet to be seen, but initial reports of those who've played the final code are positive and hint at a title with far more depth than the repetitive battle mechanic first indicates

Conker: Live And Uncut

And the puns continue. Which can only be a good thing

Release: 2004

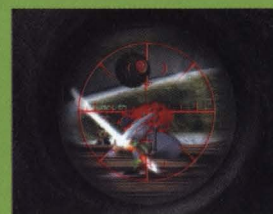


Testicles, afros, Kaiser helmets and pigtails: it could only be *Conker*. *Bad Fur Day*'s deathmatch mode contained many thoughtful details, such as doubling your character's agility when wielding a melee blade

It was a cult within a cult: the multiplayer aspect of *Conker*'s hit home with few players, but it hit hard. On top of the idiosyncratic main game, it offered an interesting variety of imaginative team deathmatch scenarios that captured all the cutesy genocide of the rest of the experience.

James Veevaert: "We're taking the one part of the game that people really loved, enhancing it, and adding some really cool features. Think about what's cool with multiplayer gaming today, but imagine it with *Conker*. A lot what Rare did with the game for E3 was just a milestone, and they're going to improve it and take it further. The artwork is changing, the game and the characters are changing. The multiplayer is changing and evolving, and you'll be hearing more about that in the next couple of months.

"If you think about what some developers do, they'll make a multiplayer game, and then the oneplayer game is just that, but with bots. That's not right. With *Live and Uncut*, they've focused heavily on making a Live game, but instead of it just being the bot version for one player, they wanted to do this extremely enhanced version of *Bad Fur Day* as the oneplayer game."



Conker's raw toilet humour should continue unabashed, but whether it'll feel as brilliantly shocking on Xbox as it did on Nintendo's 'kindergarten' hardware is something to be seen



James Veervuert, Microsoft Games Studio

“ONE THING I'D LIKE TO ELABORATE ON IS XBOX LIVE. FROM RARE'S PERSPECTIVE, THIS HELPED SEAL THE DEAL. THE STAMPER BROTHERS SAW THIS AND THEY KNEW IT WAS THE FUTURE OF CONSOLE GAMING. NO OTHER HARDWARE COMPANY, NOT NINTENDO, NOT SONY, HAS THIS”

of development is phenomenal at Rare. They have some fantastic technology. And they're brilliant at designing great games.

Can you expand on your plans for Live content in the future?

Lobb: Throughout the entire company we're excited about Live and what it adds to games. Think about the past, going back to *Battletoads*' multiplayer modes, and then you had *GoldenEye*, which clearly had successful multiplayer. Rare sees Live as the evolution of that. If you don't have your friends with you can still turn the game on and play, have a good time.

Like Chris Stamper, I play on Live all the time, and I've kinda got two groups of friends; I have my real friends, and they know who and where I am, and then I have a bunch of friends who I've met just from playing games. They have no idea who I am; I'm just a Gamertag. It's cool to have this consistent personality. I don't have to worry about where my friends are, like in the Sony universe. With Live 2.0, you can find your friends without having game plugged in, it's right there on the dash, and chat with them.

What's your Gamertag?

Lobb: No, I'm not telling you that [laughs].

Do you not think that Xbox Live is only an aspect of a game, and that you need a solid singleplayer game to base it around?

Lobb: Absolutely. That's pretty important, because 90 per cent of people aren't playing online. The same can be said about *GoldenEye*. It sold 7.5 million

copies, but how many of those people got together and played fourplayer all the time? It had to be a really solid game in order for it to be super-successful. But we are thinking about Xbox Live, and where it's going to be in a year or ten years from now. Rare is very, very aware of that; making excellent games regardless of Live.

How do Rare's accents go down in the US? Are the localised accents in Conker's changed for the US market?

Lobb: There's something ethnic about the British accent, which makes it feel a little more fantasy-like, and that's why we're so taken with something like Lord Of The Rings. For you guys it sounds normal, but for us it sounds somehow exotic.

It doesn't sound that normal, especially since we're so used to US accents in games, and not these regional dialects. But does a game like Conker's, with so much British humour in it, have anything taken out?

Veervuert: We had to make some choices – like with the *Ghoulies*, and the implication in the title – and talk to the localisation team who were like, “You can't say that – that's offensive”. There were proposed phrases in the game such as “wash my lettuce”, or something, and the localisation team had no idea what was meant by that. And the more vegetables that were suggested seemed to get the localisation team more and more embarrassed. So there are a lot of

subtleties in a game like *Ghoulies* where there are things the five-year-old will miss but dad will chuckle over. We're very aware of British humour, and how things said in a Rare game would be loaded with double entendre even though no one would realise it, and we've been very good about finding a middle ground.

Wouldn't you rather have launched Rare on Xbox with a non-original IP, such as Perfect Dark Zero?

Veervuert: No. The fact that we're launching with a new IP is awesome. It's a tremendous way to start this relationship. It's easy to go back and do something from the catalogue, but to come out with new IP that will attract new audiences is a bold initiative. I wouldn't have it any other way.

Lobb: The industry is inundated with sequels which, sometimes, are what you want. Of course I want *Halo 2*, I want *Gotham 2*. But if I think back through the history of Rare, whenever they produce something new, there's always an extra rush added. To be able to launch with both *Kameo* and *Ghoulies* is just brilliant. There's a list of reasons why we bought

them, and highest to me is that they make great IP, not that they have to draw from some stable they built in the '80s.

Here's the difference in my mind. When you look forwards, you always think safe and derivative, but when you look back at previous successes, the biggest games – like *Splinter Cell*, at Christmas – come pretty much from out of nowhere. Nobody knew about it until E3. The game was a rush, and *Ghoulies* has the same kind of freshness to it. By the time you've finished it, you're thinking, “Wow, I've never played a game like that, ever”.

I've played and owned thousands of games. I've been in the industry for over 16 years, been playing for over 20, and it's very much my passion. And *Ghoulies* is a rush for me.

I fell into the trap myself, I thought I knew this game when I saw the early versions. This is just brawling game, yeah? I'm gonna learn how to fight. But by the time you finish it, you realise that it's actually a puzzle game. The whole way you solve a room by a given set of pickups and weapons, and how and when you use these can turn a room from seeming impossible to blatantly easy. You go into a

"RARE ADDED A MOUNTAIN OF SALES TO NINTENDO, THEY BUILT GREAT IP THAT ALL WOULD HAVE BEEN NINTENDO'S, AND THEY PASSED ON THAT PURCHASE. IN MY MIND, THAT WAS A MISTAKE. IT'S VERY CLEAR FROM SEEING STUFF LIKE GHOULIES THAT RARE WAS AN EXCELLENT PURCHASE"

room, get your ass kicked, and then you try something else, and you blow it apart. You've got 100 rooms in the game; a third of those are brawling. The rest, you have to figure out a better way to do it or it's going to kick your butt. That's what makes this game.

The Nintendo difference?

After the conference ends, **Equip** manages to corner Lobb for further questions. It is too good an opportunity to pass up. Lots of unknowns still linger regarding Rare's transition from Nintendo to Microsoft, even if they don't pertain directly to the Xbox's current situation. The chance to open up some dialogue on the politics – or lack of, even – around the transition is too good a chance to miss.

Conker's Bad Fur Day is the obvious first port of call. From the intro sequence alone, which saw a murderous chainsaw dissection of the Nintendo 64 logo, the question arose: was it simply a signifier of intent with regard to the rebellious content, or something deeper crumbling behind the scenes? Was it a deliberate affront to Nintendo from some frustrated developers?

"It has nothing to do with Nintendo," says Lobb. "As we've done here at Microsoft, we just let Rare do what they want to do. What happened with *Conker* is this: they started out trying to make another *Mario*, a bright and colourful collection game with cute graphics. And it was kinda fun. But one of the designers on

the team had this idea; he made one new quest, one goal that was a little different, and it was really fun. He showed it to me, and I just laughed and laughed – it was absolutely brilliant. So the next question was, "How far can we take this?" and I said, like always, that they could do whatever they like.

"So I went back to the office, talked to Howard Lincoln and some of the other people at Nintendo. I showed them the tape of that one goal, and they laughed too. And all they really said was that we need to keep a watch of what they're doing, so as they started adding content, we'll just kept looking at it and honestly there was nothing ever where they went completely overboard. You played the game yourself, right? It was pretty out there. And the only changes made were pretty subtle."

It seemed like a huge leap in terms of content. Such U-turns are rarely brought about by anything but revolution, so it's hard not to construe it as some kind of rebellion against cuddly platforming games. **Equip** puts this to Lobb.

"What you have to understand is that all the cuddly platformers that came from Rare were the games that they wanted to

make, and so this was just a time when one of their guys said, 'I want to make a game like this'. This was after *GoldenEye*, remember, a game which was rated Teen (if it had blood, though, it would have been an Mature-rated game – the lack of blood was the only thing stopping it from getting that rating). It had some pretty violent deaths. Pretty early on in *GoldenEye*, one of the main goals was to show damage anywhere a bullet hit, with pain animations depending on where the enemy was shot. Pretty violent, and *Perfect Dark* stepped that up a notch. Nintendo really never had any problem with that."

Equip recalls a quote from **Peter McDougall**, executive VP of NOA, dated around the time of Microsoft's acquisition of Rare: "In looking at the company's recent track record, it became clear that its value to the future of Nintendo would be limited. In other words, we passed on this opportunity for very good business reasons". Nintendo had the option of buying Rare from 1994 up until Sept 2002. Does this suggest that any clash or reluctance was on behalf of NOA rather than NCL?

"I didn't want Rare to be sold when I worked at Nintendo," says Lobb.

"Obviously, Rare added a mountain of sales to Nintendo, they built great IP that all would have been Nintendo's, and they passed on that purchase. Honestly, in my mind, that was a mistake. It's very clear from seeing stuff like *Ghoulies* that Rare was an excellent purchase. But I think the real validation is going to be years from now after Rare have shipped five or six games. I think they'll keep going onward, with those five or six games being significantly better than what they've done in the past. They're very good at making better and better games. Rare is a genius group of guys working at a beautiful facility. The decision not to purchase them, especially when the option wasn't particularly expensive, was definitely a mistake."

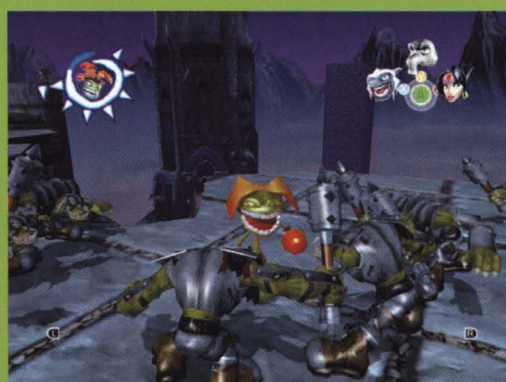
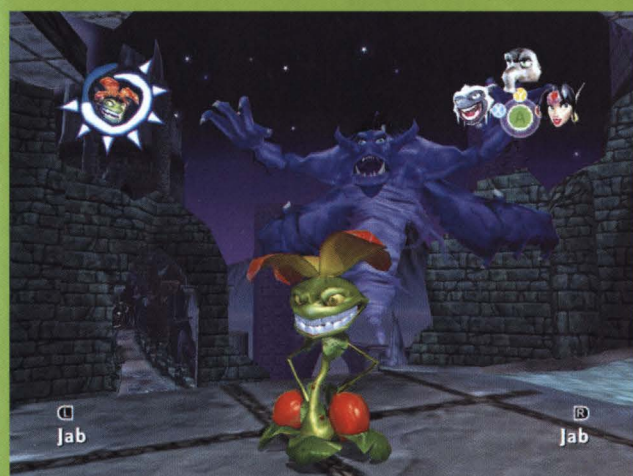
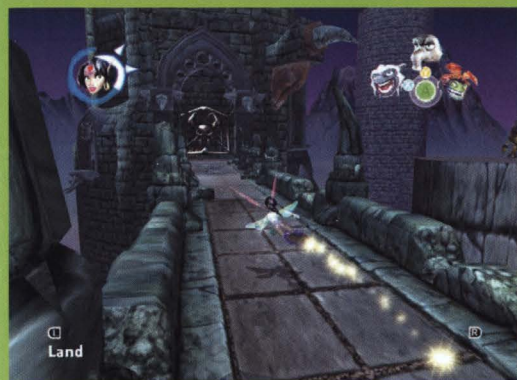
Clearly Rare has a lot to offer, but it still has a lot to prove. The company's been busy, it seems, and its output is looking to lead Xbox in technical terms, at least. But as to whether or not the content will dazzle, and whether Microsoft's ownership will be so accepting, is another thing. But it will be anything but uninteresting. Rare has always been quiet, but of course it's the quiet ones that you have to watch.



Kameo: Elements of Power

Pick your own path with this animal crossing game

Release: 2004



Part of the appeal of *Kameo* is to expand the corridor of possibility available to the player. A grinning carnivorous cherry-tomato plant seems anything but stealthy, though

It's been a long time coming, appearing some time ago as a GameCube title. Now, much has been changed, making *Kameo* an unrecognisable relative to the first details that emerged. The short video shown at X03 revealed a game far more elaborate, enticing and busier than previous previews may have suggested.

The adventure follows the titular Kameo, a fairy the ability to breed and control other creatures to her own end. So far, the game features many colourful half-creature, half-plant chimeras that the player can rear and wield as they see fit.

James Veervaert: "The main thing about *Kameo* is that there are a lot of ways you can play it. You can play it as an exploration game, or you can play very aggressively. You can raise huge monsters and just fight, or you can find very clever ways to do levels without having to face-off. At any given time, you can try to find any one of many solutions; if you want to pound your way through as a giant, that's great. Or if you want to be a little weed, you can sink underground and pass by unnoticed. Choose the way you want to play."

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Xbox Top Ten

Equip previews selected highlights from the near future

Extrême sports, roleplaying, racing, arcade-style action, and a certain little sequel to one of the best videogames ever made – on the evidence of **Equip**'s ten Xbox titles here the format appears to offer everything to the contemporary gamer.

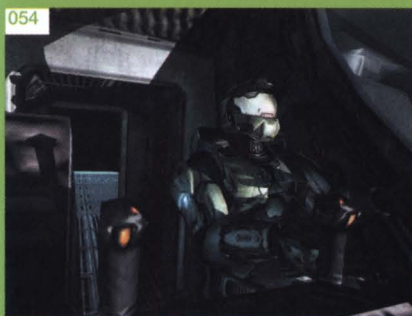
And it's critical, of course, that Microsoft has all bases covered, for a breadth of software catalogue was chiefly what gave the original PlayStation such impetus and what continues to drive its successor's progress.

But making an Xbox game is no simple undertaking, and there's every chance that the sheer ambition of titles such as *Halo 2*, *Fable* and *BC* will keep them from reaching your console's disc

tray for a long while yet. And, if Xbox 2 really is on course for a 2005 release, these could be the last games their creators ever make on Xbox.

Have you considered that? That in Xbox, with its hard drive and Internet connectivity out of the box, developers have a machine whose riches are so vast that to do justice to a vision using its architecture might actually mean their contribution to its software catalogue amounts to just one single title? Even a straight action game such as Tecmo's *Ninja Gaiden* (see p42) has been four long years in the works.

But don't think about it too much. Focus instead on what the games may bring when they *do* arrive... **E**



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Project Gotham Racing 2

The streets are alive, once again, with the sound of original driving material, in this tale of ten cities

Publisher: Microsoft Game Studios Developer: Bizarre Creations Release: November



Trackside detail has increased exponentially over the original *Project Gotham*, the trade-off being that lower frame rate. While the difference is visible if you're looking for it, it doesn't impede the gameplay in the slightest

Borne from a codename that indicated the inclusion of New York as a location that featured heavily in the original, the title here no longer applies. The Big Apple, along with all previous cityscapes that appeared in *Project Gotham* (yes, even London) have been retired to make way for ten whole new locations. It's a misnomer, true, but when you consider the excellent pedigree of the first *Gotham* title, it's going to be impossible to shake the brand away.

But then *PGR2* feels more like a sequel to Dreamcast forerunner *Metropolis Street Racer* than *PGR* itself. Mostly, it's due to the architecture in the environments feeling more fleshed out in comparison to the slick-yet-flat appearance of *PGR*.

Bizarre Creations' **Matt Cavanagh**: "Cities are now streamed from the disc, instead of loaded up at the start. It means we can do way more with the visuals, which is one area where *Gotham 2* has

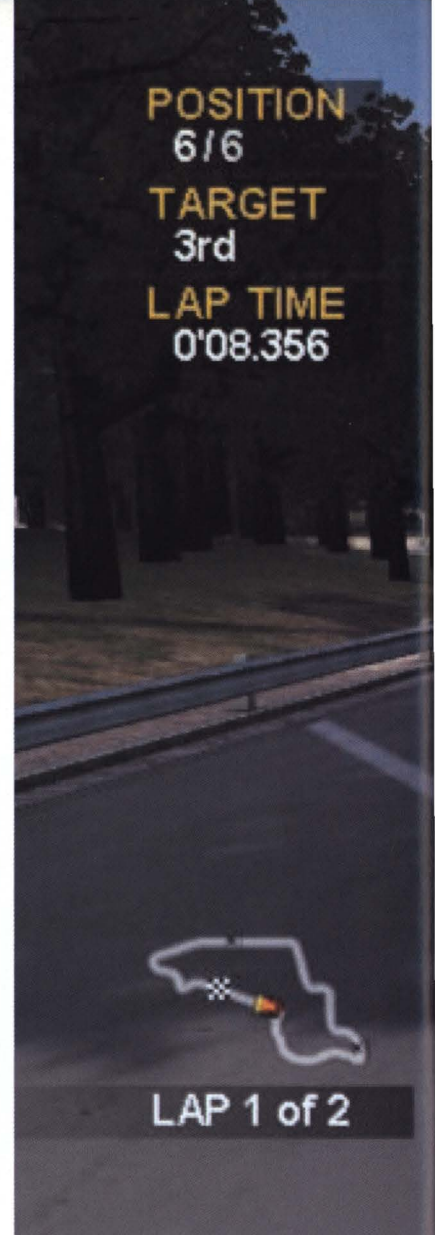
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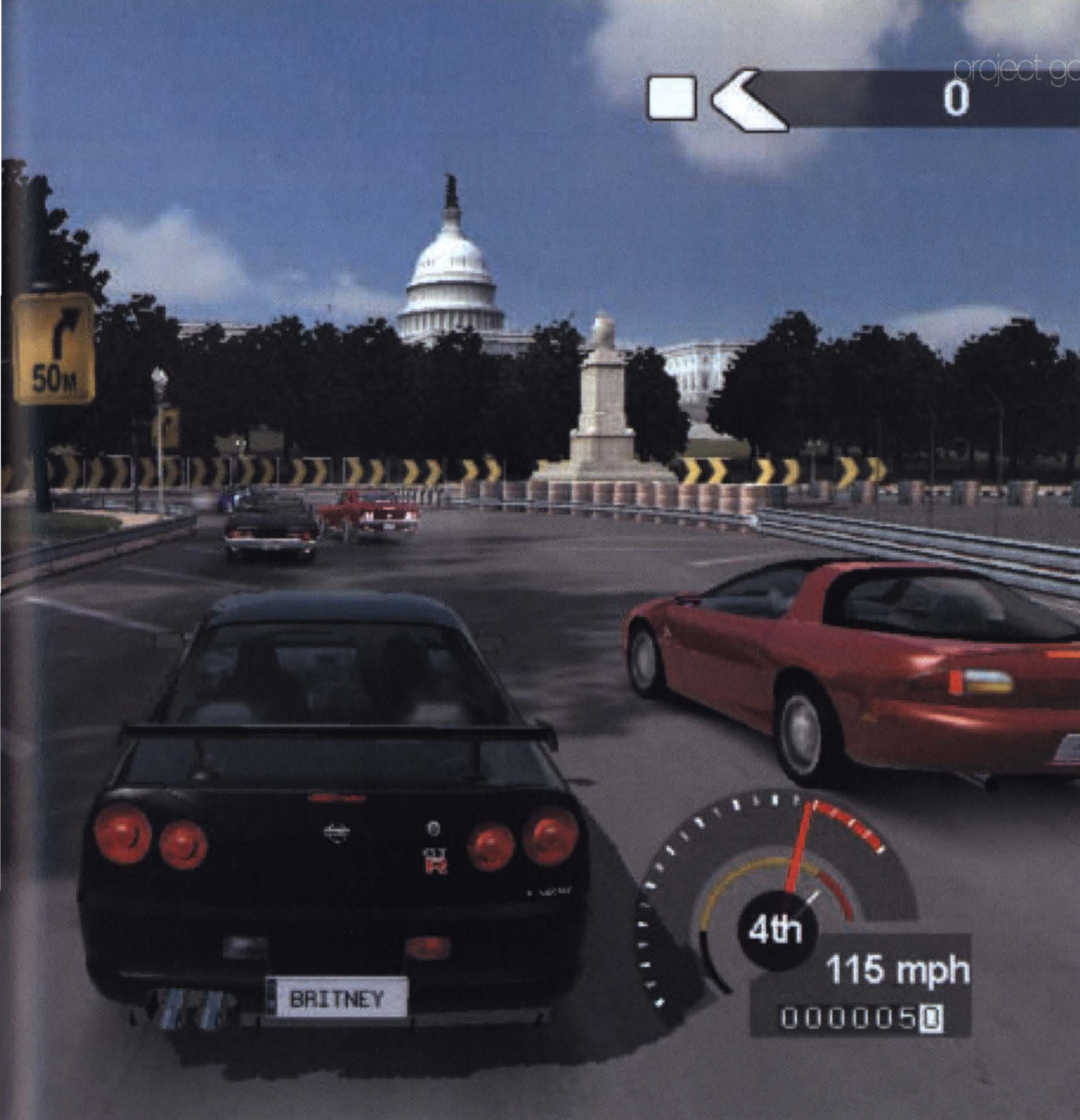




Speed Camera challenges are simply reiterations of the Top Speed goals from Dreamcast title *Metropolis Street Racer*, except you're only given a smaller, more demanding stretch of track to work with. The overall difficulty gradient seems to be reasonably less harsh than the original *Project Gotham Racing*, though



been pushed. Textures now have natural lighting, cars are self-shadowing and depth-of-field effects are in place. There's also full-screen antialiasing in there." Which would explain why Bizarre Creations recently announced that the frame rate would be locked at 30 frames per second, causing the typical can-can line of kneejerks on Internet forums the world over. "The simple truth is, you halve the frame rate from 30 to 60, and you double the number of available polygons," says Cavanagh. "This means we can make the buildings appear far more 3D than before, giving them bulk as they speed by. We've also added more ambient effects, in the form of flocks of birds and such." Equip noticed plenty of flocks, but few other ambient effects. But that's not a complaint: the beautiful fresnel reflections that gleam past in the bodywork, coupled with the light cast in between buildings, help bring as much life to these cityscapes as the game needs. These feel like genuine urban locations that have been transplanted on to



project g^otham racing 2



Cobbled roads are relayed to the player via a force-feedback tremble in the joypad. It's not as intense as *Rallisport Challenge*'s constant hand-quake, thankfully

the screen, as opposed to stages crafted especially for a driving game commission. Over 75,000 research photographs plus countless sketches and reels of footage help explain that. And Edinburgh in the daytime is just one of many highlights.

There's no issue with the frame rate, either. It is noticeable when juxtaposed with *PGR* but, since it's locked, it's not noticeable unless you're looking for it, and even then there's no way it could be construed as bothersome. Bizarre Creations has made the right choice, **Equip** reckons, although there does seem to be some pop-up on certain stages.

As for the game's structure, two main modes of play are available. The Kudos World Series is a career mode that works up through increasingly powerful classes of vehicle via a series of challenges. Five medals are on offer for each challenge; it's a more measured form of the kudos gambling system of the original, but it does allow players to tackle the stages with as much or as little voracity as they can

handle. The medals grade from steel through to platinum; the more precious metals have more demanding criteria and opposition, but offer the greater rewards for completion. Arcade Racing mode, meanwhile, will satisfy anyone frustrated by the idea of having to earn your way to the upper classes of vehicle; it offers players the chance to street race a series of tracks using predetermined cars from many differing classes, and has the same medal system in place.

Reap enough kudos, and you're elevated to a new rank, which rewards with tokens, and these are used to buy new vehicles. Early ranks garner just a handful of tokens, but considering that some of the most powerful cars in the game cost 1,000 tokens, later ranks must offer sheer windfalls. The kudos system has been refined expectantly, too: extra bonuses include taking the best driving line, and using the slipstreams of your opposition. Bashing into rivals does nothing to ruin your kudos combo, nor

does just clipping a barrier. You'll have to thump into a wall convincingly to have your kudos tally revoked, and if you're in the middle of a combo you won't lose it all.

Incidentally, your garage is a building that you get to explore in firstperson, ogling every vehicle in the game like some red (brake) light district. If you see any model that takes your fancy, then take it out for some functional missionary driving in the form of the basic test track.

All this, before you consider the fact that the multiplayer is going as global as the cities on offer via Xbox Live, with many play modes for eight people at a time, as well as downloadable ghosts and more.

Edge's review of *MSR* reckoned that "The quality of a driving game is proportional to how good the player feels when he pulls off a perfect corner... *MSR* treats cornering as a science. No, more like a real sport – requiring you to use skill and rhythm". Going by this yardstick, *PGR2* is looking to be one of the best-cornering games ever made.



Driving decathlon

The list of ten cities featured in *PGR2* is as follows: Edinburgh, Sydney, Yokohama, Hong Kong, Stockholm, Florence, Chicago, Washington DC, Barcelona, Moscow. The Nurburgring is also included ("The older, more dangerous version," says Cavanagh). However, more cities will be able for download through Xbox Live. Understandably, it will be premium content ("Obviously, these take more time and expense to put together than your typical downloadable map"), but no details are available as to what cities will be proffered; Liverpool is an obvious safe bet, though. As a side note, Cavanagh reveals the following: Bizarre Creations has "more than two" projects in the works besides its *Gotham* series. **Equip** suggests *Fur Fighters 2*, and crosses its fingers.

Ninja Gaiden

Four years in the making, Team Ninja finally reveals its bloodiest title to date. But what of the substance behind the decapitations?

Publisher: Tecmo ■ Developer: In-house (Team Ninja) ■ Release: TBC



Bosses hinted at so far in screenshots include a ginormous skeletal dragon and this helicopter gunship. Following well-established videogame convention, bosses will appear mid-level and at the end of each stage

Ninja Gaiden has been nothing but flashy FMV sequences for a long, long time, so it was with some relief that **Equip** finally got to see a game that plays as interestingly as it looks.

The game's creator, **Tomonubu Itagaki**, demonstrated the first and third level of the game, and did it with his customary insouciance. "I think the camerawork and cinematics are superb," he said, as if the word modesty, or any corollary, had never been created.

But, ironically, the things he boasts of appear to be the game's main sticking point. The action is faced paced; enemies appear quickly and don't hesitate to attack the hero, Ryu Hayabusa, in large numbers. They leap into the fray, bounce from walls and hurl shuriken with gusto. (This ranged weapon is particularly potent, nipping away at the player's energy bar, and from a visual perspective looking more like lightning bolts emanating from the

Continued >







When Ryu enters each area the camera swings around to show his entrance. This looks dramatic and helps to set up the action, but at the present time it often means that unseen enemies can get an early strike in on the hero unfairly. Fortunately, once the camera finishes its cinematic framing it begins to track behind Ryu again



After his clan is massacred by the Vigor Empire, Ryu sets out for revenge and to reclaim the holy sword Ryuken. Further content is promised for Xbox Live users

finger tips than metal throwing stars.) However, the camera system Itagaki-san seems so proud of simply fails to keep up with the action.

Equip played the game and, although the camera isn't terrible (and it will surely be tweaked and further tweaked as development progresses), the pace is too frenetic for it to efficiently track all of the attacking enemies.

But Ryu moves with speed and grace, and, like his enemies, can perform an outstanding number of gymnastic flips and contortions. These include wall-running and an audacious back flip off of surfaces – a move that can make him suddenly appear behind an unwary foe.

Superficially the game bears some resemblance to Sega's *Shinobi*, a comparison Itagaki-san was quick to dispel – “that was close to a good game,” he said dismissively. There's the same ‘shadow’ trace when the character zooms

around areas slicing through enemies, but this game is far more bloody, gratuitous even. Take enough energy from an assailant's life meter and a decapitation move can be executed. It's even possible to sever the heads from several opponents in one attack. The blood flow is copious and, admittedly, the feeling of satisfaction is high.

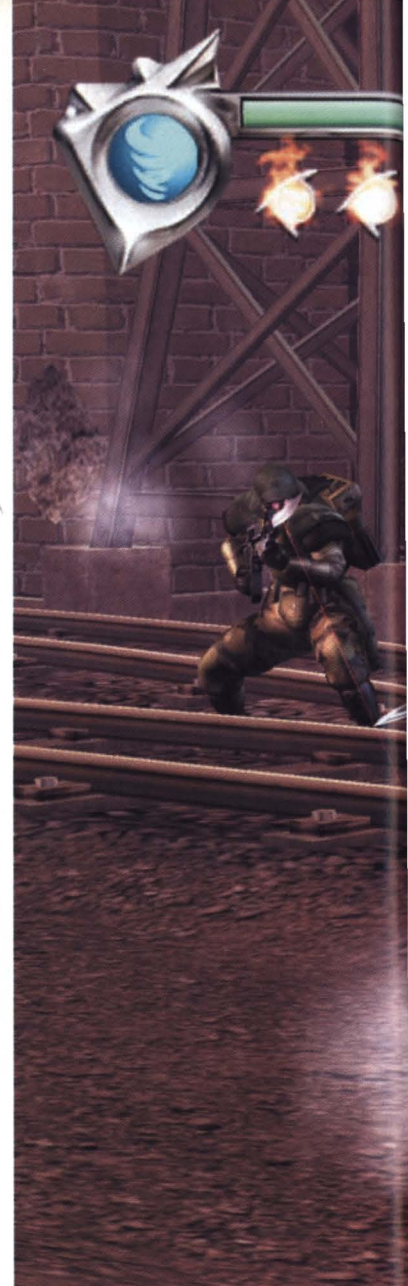
As with the original coin-op versions of the game, magic will play a significant role, with ornamental chests littered around the levels furnishing the player with anything from weapon upgrades to health potions. Pressing the X and Y buttons together launches a magic ‘smart bomb’ attack, wiping most of the enemies out in one burst, while a strategic depth is also hinted at: Ryu begins the game with five weapons, including nunchucks and a katana, and the player must discover which is most potent against each enemy. This became more important in the third

level **Equip** sampled, where enemies began shooting bullets, as these could be deflected with the katana blade.

Retroheads will also be pleased to learn that Team Ninja has kept with its tradition of including many unlockable historical delights in its games. Most obvious is a dusty old arcade machine, which once found and operated with the appropriate disc can be fired up to play the original versions of *Ninja Gaiden* (1987), *Ninja Gaiden Episode II: The Dark Sword Of Chaos* (1990) and *Ninja Gaiden Episode III: The Ancient Ship of Doom* (1991).

Ninja Gaiden is more traditional than some might have expected, but it still remains a potent mix of acrobatics and energetic hand-to-hand combat.

Don't fear the camera too much. From what **Equip** has played, Tecmo's game is going to impress anyone who has a hankering for a bloody, action-packed oriental adventure.





The blood and violence is excessive, ensuring the game will get a mature rating in certain regions. However, Team Ninja realises content will have to be altered if a release is to be ensured in some European territories, such as Germany

Full Spectrum Warrior

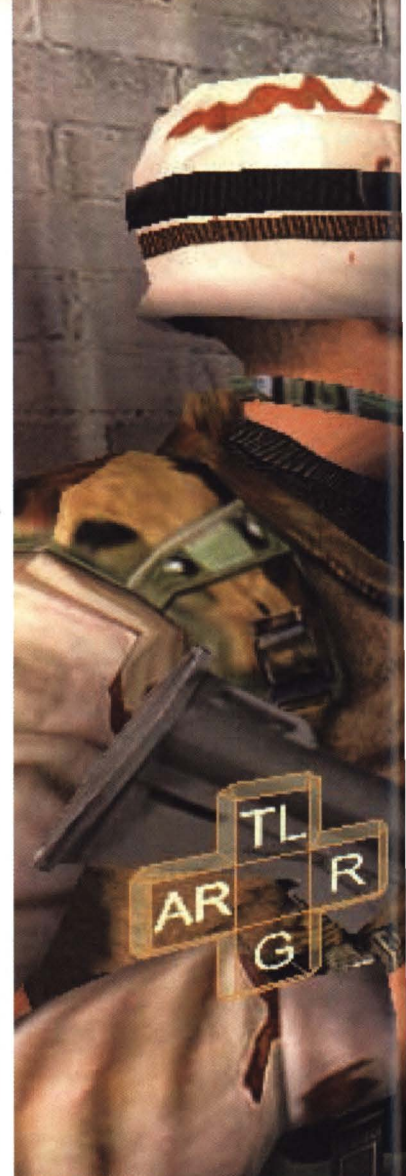
If it's good enough for the army, it's good enough for you. Or should that be the other way around?

Publisher: THQ Developer: Pandemic Studios Release: Spring 2004



Control playing game

Excellent use seems to have been made of the joypad, giving you maximum sway over your squads. For example, when you sweep the cursor over nearby terrain, it demonstrates what formation your troops will fall into when they reach that object or area. They'll huddle up behind a sculpted chunk of debris, but will line up neatly when placed up against the wall of a street corner. Different team members have their unique roles, obviously, but it's your team leader who you'll want to peep around any blind spots as he has the greatest vision.



It's no wonder Pandemic Studios' *Full Spectrum Warrior* picked up so many awards at E3. It's the ultimate game for bystanders, because that's exactly your role. It's unique among Xbox war titles in that you no longer control your troops directly, but via a series of commands.

You wield a pair of four-man squads, each of whom can be subdivided into pairs, allowing for up to four independent troop cells. It's thirdperson, but you're no longer locked in a locus three feet behind your character; instead, you flit between

units, and use a series of menus and a cursor to assign a set of orders to them, which they dutifully execute. Take cover here, lay down fire just there, and allow the rest of the unit to advance. Imagine *Conflict Desert Storm* meets *Commandos*; this unshackling of the fixed perspective has allowed the developer to make troop movements convincing to the point of news-report realism.

The first mission begins with a helicopter touching down in a deserted backyard, and it's an event that's accompanied by all the thunder and disturbance you would expect from such a terrifying insertion. Litter spins and twirls as the rotors whip up a localised hurricane, washing lines buck and ripple, and a battalion of soldiers spill out into the LZ to begin their mission, combat fatigues flapping and waving as Newton intended. It's stunning stuff, and possibly the most visually realistic yet seen in a game of this style. And then there are the details – call in air support to obliterate a roadblock of enemy tanks, and be prepared for more than just a show of shock and awe as

the blade wash of the incoming chopper scatters any nearby plumes of smoke. Take cover behind a burnt-out vehicle, by all means, but don't be surprised when relentless enemy fire gradually desiccates it into a rickety frame that no longer provides shelter.

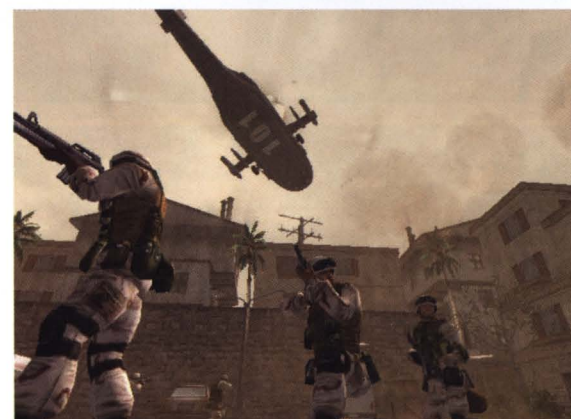
'Bystander' is putting too relaxed a spin on it, though, since *Full Spectrum Warrior* is also a light infantry-training simulator designed for the US Army as "a tool to reinforce Army doctrine and squad tactics amongst troops". That's one emulation no one expected on Xbox.

There are worries, of course, about longevity, about how to keep the gameplay fresh for more than a few levels when the core situations that rear up in urban combat are nearly always identical; it's one thing indoctrinating military recruits to the basic tenets of warfare, but another to keep a gamer snared for hours at a time. Regardless, it's hard not to be transfixed by how capably Pandemic has captured the tableau of modern day warfare in the Middle East, and so such doubts, for the time being, are MIA.



Architecture should be accurate enough to keep in with the Sim Gulf theme of the game





Keep your teams moderately spread out, or you could suffer a cull from just one sly (or bungled) grenade. Use one unit to cover, and the other to move

Breakdown

Namco seeks to popularise a new genre by melding two existing ones. Will the result be a compelling mix?

Publisher: Namco Developer: In-house Release: TBC



Alex appears at the beginning of the game to help you attempt to piece together what has happened. But she's not just a pretty face, and proves a valuable companion in battle. Or so Namco claims, at least...



While the game's appearance might immediately bring to mind unpleasant memories of Dreamworks' over-ambitious and massively flawed *Tresspasser*, the emphasis here is firmly on combat, not physics

Though on the face of it *Breakdown* looks reminiscent of many typical actioners, the screenshot above encapsulates how it's different: it's not a firstperson shooter but a firstperson *combat* game.

Sure, much of the game's challenge is dealt with via traditional firearms, but your arms and legs are equally put to use to rain punches and kicks upon opponents.

You are Derrick Cole, although even information such as your name is lost to you as the game begins, awakening on a bed with some serious amnesia. Clearly, though, something strange is going on: your torso is covered with pulsing white veins, and it's this transformation that gives special power to your unarmed combat.

Helping you get back on your feet is Alex, a female character who provides information on your background and fights alongside you during combat. It's not yet clear how such action plays out, but it's likely that her manoeuvres will be largely scripted rather than in driven in real time.

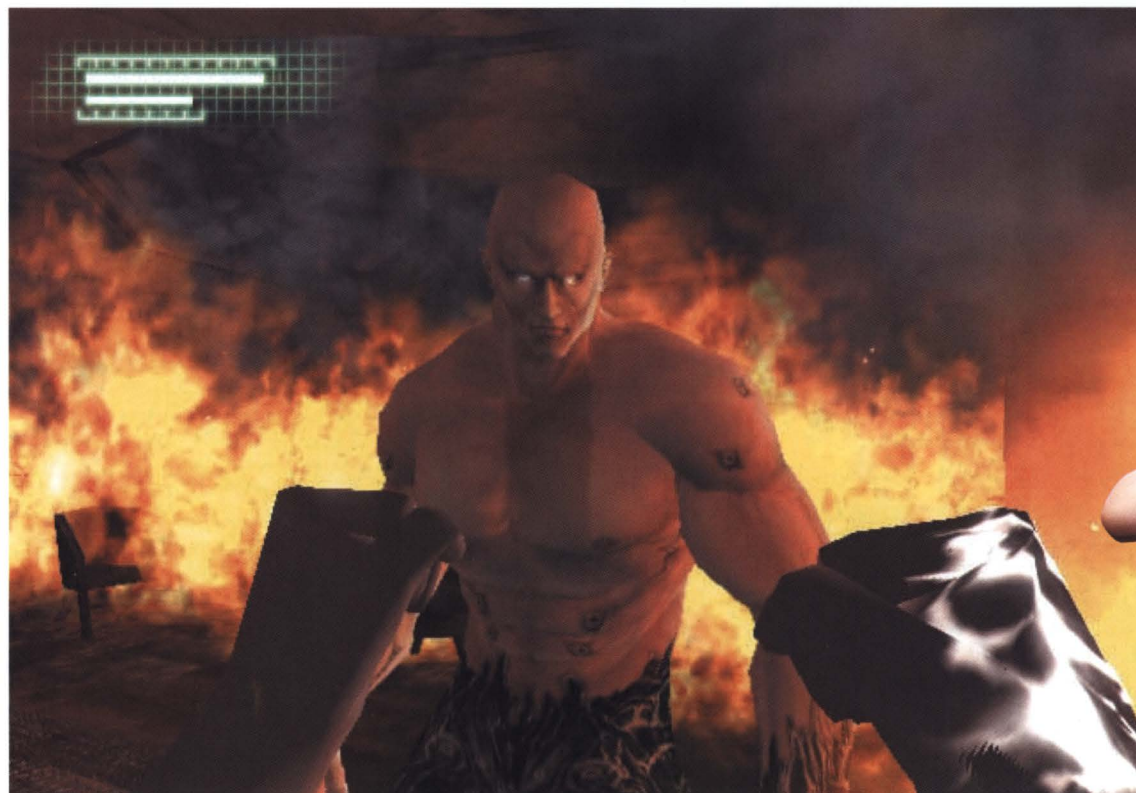
Equip hasn't yet been able to play *Breakdown*, but a presentation at X03

suggested a typically polished Namco production, the game's characters appearing in cut scenes with a distinctly *Tekken*-esque feel about them. And that's no real surprise, since several of the game's development team previously worked on the *Tekken* series; their contribution here chiefly concerns engineering the hand-to-hand combat.

Breakdown's project leader, meanwhile, is a veteran of the *Time Crisis* series, and he has suggested that this new game will be built as a series of spectacular set pieces strung together by more traditional firstperson action.

One peculiar – if nevertheless realistic – aspect of the game is its handling of weaponry: you will simply not be able to hold a firearm while punching and kicking, and a two-weapons-at-one-time maximum is always set on your arsenal. Looking out for dropped weapons and ammo from your enemies will be a key requirement.

Clearly Namco is attempting to break new ground with this title, and it certainly has some quality ingredients. But will it all hang together convincingly?



Breakdown's characters have that distinctive Namco feel about them; some of the enemies' torsos (left) could have been ripped directly out of one of its *Tekken* titles



Fable

Good or evil? Black or white? Big Blue Box adds its own brand of character freedom to the crowded RPG market

Publisher: Microsoft Developer: Big Blue Box Release: TBC



Peter Molyneux is the best in the business at baiting the press with headline-grabbing selling points. "Imagine," he says, and the pens begin to move. "Imagine if you could build a unique character. If you are nasty, your character reflects this in his appearance. But if you are heroic, you can enter a village and the children will follow you around the streets. You can marry the mayor's daughter, settle down, have kids... Depending on your actions, the people in the village will

alter their behaviour towards you."

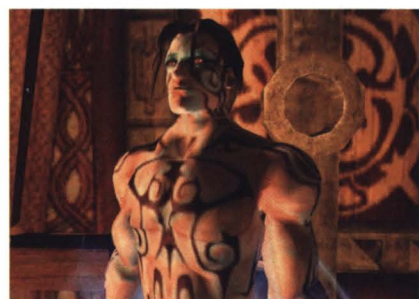
Fable is beautiful, but if anything Molyneux is even better at painting pretty pictures in our minds. Fact is, these character-building aspects of Big Blue Box's ambitious RPG have been mentioned before, but at X03 Molyneux was keen to emphasise just how emergent the gameplay is. Remember the mayor's daughter you just married? Well, should you wish to, it's entirely possible to secretly murder both your wife and your father-in-law then pocket a sizeable inheritance. Want to be a bigamist? Go ahead – there are plenty of villages in the game and nothing stopping you being so callous wherever you travel.

Scenarios like this were trotted out as if they were shaped by your actions rather than a result of prescribed missions. But though the game was in demonstrable form, there was no evidence of such rich interaction and reaction. Villages were empty of occupants, the mayor was nowhere to be seen, there wasn't even a

buxom barmaid to entertain. **Equip** anticipates there's a long way to go if Molyneux's promises are to be realised.

What was on offer, however, was a combat system. Demonstrated by Big Blue Box's Simon Carter, the hero entered a forest clearing and began slicing into a group of bandits. In truth, the battle appeared curiously staid, with only one character engaging the hero while the others held back and waited. Again, it should be underlined that this is an early build, but the combat raised more concerns than it answered.

On a positive note, *Fable* looks sumptuous and the structure is now better defined: the player takes branching quests, but these always turn back to a central narrative thrust. If you do decide to get married, for instance, something nasty is likely to happen to your family to spur you back on course. Maybe it's not so open-ended as first promised, but **Equip** remains optimistic that *Fable* will offer something fresh and compulsive.



The hero's appearance (left) will alter according to the missions taken and the decisions made



Only sword-based combat has been demonstrated so far, though magic – and the resultant translucent effects – is promised. When you strike an enemy, a glowing red damage indicator appears above their head, lending the combat a traditional RPG feel

Tom Clancy's Rainbow Six 3

Clancy's digital empire looks set to expand with this counter-terrorist shooter. Sounds like a conspiracy...

Publisher: UbiSoft Developer: Red Storm Release: November

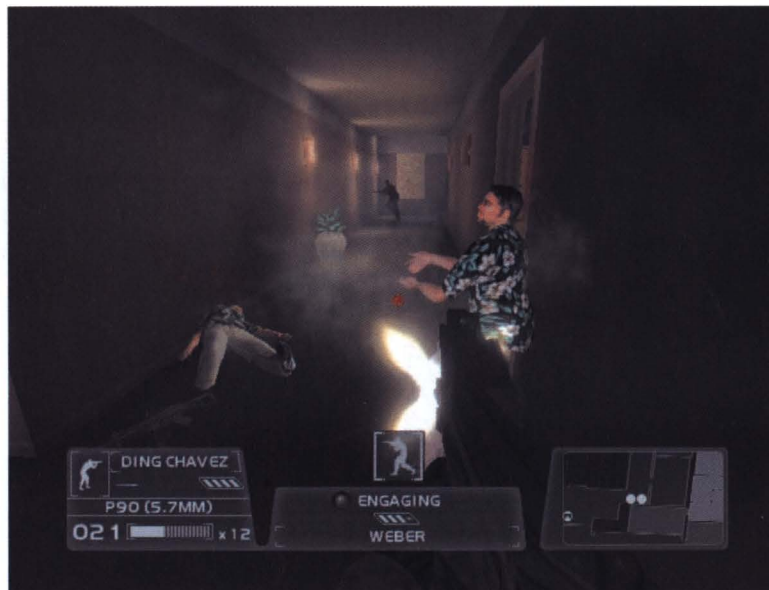


Your squad is a mannerful bunch. Although they don't always move with grace, they never seem to get in the way and usually take up an excellent vantage point



Ready aim

As a concession to the game being controlled with a joystick, the aiming reticule is now surrounded by a small red circle. It's a hotspot circumference for auto aim; train someone in this exaggerated sight, and your bullets will hit, regardless of whether you're firing dead centre. Red Storm chose this approach to compensate for the lack of mouse aiming but purists will have the option to disable such a favour.



Brazen firefights such as this are best avoided, especially when playing on the more demanding difficulty settings. Your team can clear whole rooms for you, inserting grenades or a flashbang before entering

UbiSoft is now so prolific and distinctive among thirdparty publisher/developer combos that *Rainbow Six 3* can be comfortably be described as a linear combination of its other output over the past year. It's *Ghost Recon* meets *Splinter Cell*, albeit in the urban anti-terrorist context of Tom Clancy's *Rainbow Six* series; *Ghost Recon* for the squad combat and *Splinter Cell* for the flourish and frippery of the visuals.

That's just a rough description, of course. The *Ghost Recon* analogy extends to your role as leader of a four-man team you must command as an effective tango-busting unit, while paying due respect to the fact that a bare-faced firefight in open ground will often leave you dead. Controlling your squad is simple – point the reticule at something, and press A. They'll move there. Toggle the black button for them to regroup or cover you. Hold A for a more advanced set of options, such as instructing your teammates to boot

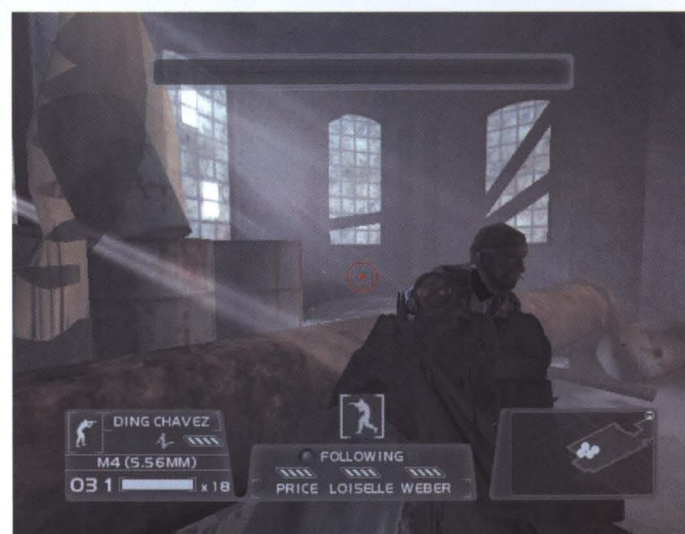
down a door, release a flashbang, and then clear the area. Every command can also be given a 'zulu' delay, where your team will not execute the request until you give the word, allowing you to take position at, say, another door on the other side of the room allowing for an effective pincer movement.

Via the Live headset, you can give your literal word, too. Although the game does feature online play, it's also possible to give your offline squad instructions without having to press a single button. Plus, any verbal update from your team (who, incidentally, are a melting pot of nationalities) regarding the situation will be relayed via the earpiece on your headset.

The *Splinter Cell* analogy extends to how much detail has been imported from Sam Fisher's game. As well as the accomplished night and thermal vision (the latter of which has had to be toned down, as it proved too effective), copious lighting and fabric effects are in place. Not to

mention the fearsome realisation of the flashbang grenade: fail to turn away, and the world freezes, your ears thrumming as if buried deep in conch shells, before blurring gradually back into contemporary sight and sound.

It's not actually possible to separate your troop up into individuals, meaning they act as a complementary unit to your own actions. Regardless, in the preview code that *Equip* played, they showed minimal signs of boneheaded behaviour, and took up surprisingly savvy positions wherever they were told to stand. Combined with an effective HUD, it seems set to be absorbing without being bemusing. There will be no pre-mission strategising, and the developer has made nods to the fact that the Xbox version is not a PC game (see Ready aim). Hopefully, this shouldn't rob the experience of any depth, and it should turn out to be yet another consummate strategic shooter for the console.



Holding the A button brings up a quadrant of advanced options that can be used when you have to breach an unknown room. (Centre screenshot) Lighting effects in the key of *Splinter Cell* are dashed around the environments in order to bring them to life. It's atmospheric stuff

Halo 2

Can the revolution of Combat Evolved strike once again? The universe does, quite literally, depend on it

Publisher: Microsoft ■ Developer: Bungie ■ Release: Spring 2004



If you're reading this, odds are there's just one question coagulating in your mind. Why on earth is *Halo 2* so far back in **Equip's** Xbox top ten, when it should be riding high at the apex of expectation? The reason is simple, if unfortunate – there's little new to reveal about the game, which relegates it to the background behind those that are more forthcoming with their details.

Despite **Equip** attending the recent

press conference with Bungie at Microsoft's X03 event, nothing was to be gleaned bar some precious seconds of new footage, and the screenshot above. After having two questions deflected by **Pete Parsons**, studio manager at Bungie, **Equip** asked outright if there was any actual new information that he could divulge. The answer? A long-winded "no". And why is Bungie being so tight-lipped? Is it because it can, or because there is still much to be decided and implemented? "It's because we want to make sure everything is as great as it can be," explained Parsons, nebulously.

Frustrating conference appointments aside, Microsoft premiered a brand new 'making of...' video, splicing the E3 footage with micro-interviews with staff from Bungie. Jason Jones reiterated how Bungie is completely focused with the story it wants to tell. Jaime Griesemer explained how *Halo* is just the same 30 seconds of action repeated over and over, and that the secret to making a great

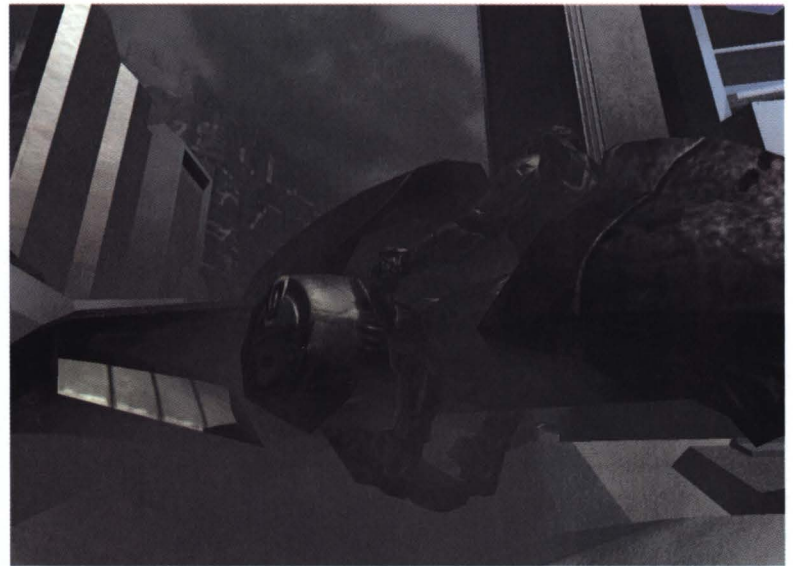
game is simply being able to capture that half-minute bubble of glorious intensity before repeating it ad infinitum.

Those fleeting glances of the new footage: a swooping camera shot of Jackals patrolling a beautifully lit installation, Elites guarding a door and wielding brand new Covenant handguns, plus an in-game camera pan of the head and torso of a Prophet, an enigmatic Covenant leader who appears to be a richly coloured bird of paradise among enemy types.

But these are mere plankton of detail on what must be one of the most eagerly anticipated games since *Ocarina Of Time*. Internet rumours are currently running such a gamut that they're cancelling one another out neatly – some say that the game is finished and Microsoft is holding back, while others say that the game is in dire straits with key team members jumping ship. No one at X03 gives credence to either, and the world, though watching expectantly, is none the wiser.



The prospect of being driven by marines, instead of leading the fight yourself, is a welcome antidote to always being in charge



The Prophets remain a colourful enigma who, despite not displaying the intimidating aggression of the Brutes, must wield some incredible power in order to remain at the top of the Covenant food chain

Amped 2

Microsoft surprised everyone with its first snowbound outing on Xbox; now it's building on those frozen foundations with some style

Publisher: Microsoft Developer: In-house Release: November



Lost in the blizzard of attention surrounding *Halo*, *Amped* was part of a strong Xbox launch lineup that never really got the respect it deserved. It remains one of the system's best titles, and the sequel looks to improve on it in every possible way. And, while few sequels promise anything else, preview code reveals that *Amped 2* makes the original game of snowboarding look stripped, incomplete.



'Snowskate' is a skate/snowboarding hybrid mode. Grabs are clearly essential moves...

But in addition to the bigger-is-better motif – more mountains, more enormous mountains, longer runs – there's also a significant change in philosophy at the heart of the game.

Videogames have always taken a very more-is-more approach to extreme sports tricking. *Amped 2* remedies this somewhat in that higher points aren't necessarily awarded to those who can perform the greatest number of spins in the air, but to those who can perform them with the most grace.

So, a single 360° rotation taken at constant speed will earn more points than a hasty pre-wound mess.

Landing plays a part here, with the original *Amped*'s harsh, tumbling physics sacrificed for a more forgiving model that rewards the player for elegance, rather than sending them falling for fractional angular imperfection.

The control system remains broadly the same, although rail sliding now

employs a similar balancing system to the *Tony Hawk*'s games, and hand plants are available to those who want them.

The game also imports another element from Activision's series with the addition of 'Snowskate', which, as the name implies, is a kind of snowboarding skateboarding crossbreed.

In this mode the player's feet are no longer tethered to the board, affording the opportunity to try different tricks, but also requiring the player to remember to grab it as they do so. Failure results in gravity and inertia taking the board in different directions from you, with inevitably frosty results.

So it's a sequel, but the best sort, expanding on the original and introducing enough new ideas to make purchase worthwhile. And maybe, since it's going to precede *Halo 2* by several long, agonising months, it'll actually receive the attention it looks like it deserves.





Amped 2 also supports Xbox Live, allowing up to eight players to sample various multiplayer trick challenges together, or to just play showoff down a mountainside. In the background, meanwhile, the game will provide around 300 music tracks, mostly of a decidedly overwrought, emo nature

Race Driver 2

It's one driving game to rule them all in Codemasters' lord of the racing rings

Publisher: Codemasters Developer: In-house Release: Q2 2004



NASCAR is one of the many driving experiences that Codemasters is attempting to emulate. Whether or not its engineers can bring together so many disparate modes under one umbrella will make or break the title



An entirely new 3D engine has been developed specifically for the game, allowing for plenty of convincing effects. A lot of money has been spent on licensing vehicles, so expect them to be rendered with loving care

Moderately subtitled *The Ultimate Racing Simulator*, *Race Driver 2* may need a bit of explaining. It's the sequel to the *TOCA* game that was released last year, itself a sequel to a long-standing series of PSone *TOCA* titles, and recently re-issued as an Xbox Live-compatible budget title. Confused? It's about to get even more elaborate.

Codemasters' goal seems to be to bring together a diverse number of driving disciplines under one engine. It'll include 30 global championships that'll take in 56 racing circuits, and include GT Sports Car Racing, Street Racing, Rally, DTM, V8 Supercars, Global GT Lights, Rally Cross, Formula Ford, Open Wheel Grand Prix and Classic Car Racing.

It sounds like the company's most ambitious title yet, albeit one designed to

make the genre obsolete while stepping on the toes of every possible competitor.

Reassuringly, it's an Xbox exclusive, meaning that development is free from the plateau of multiformat pressure, and so *Race Driver 2* can receive the kind of focus no other Codemasters driving title of recent years has enjoyed. And it'll need it in order to come anywhere near the lofty bullseye that's been mooted.

Some more details: it'll have an entirely new visual engine, 35 licensed vehicles, and Xbox Live functionality.

For those bemused by the inclusion of a narrative in *TOCA: Race Driver*, you may be equally dazed to hear that Codemasters is promising a 'reality TV'-style storyline as 12 drivers battle it out over the range of championships. Does its ambition stop nowhere?

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Microsoft
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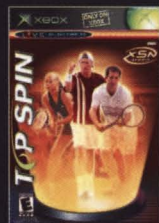


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BC

Lionhead's sprawling prehistoric adventure now has an objective, but will the journey there be worth it?

Publisher: Microsoft Developer: Lionhead Release: TBC



Gamers like structure, they like goals, but up until now Lionhead has been a little hazy on what you're actually supposed to do in *BC*. Turns out there's a mythical valley, a haven away from the countless prehistoric hazards, where primitive man can begin to settle down and build a civilisation. This is the ultimate destination for your tribe and the main motivating factor for the player.

Your tribe members begin with very few skills but they learn quickly, and, as you might expect from game whose production is overseen by Peter Molyneux, *BC* is all about nurturing and teaching.

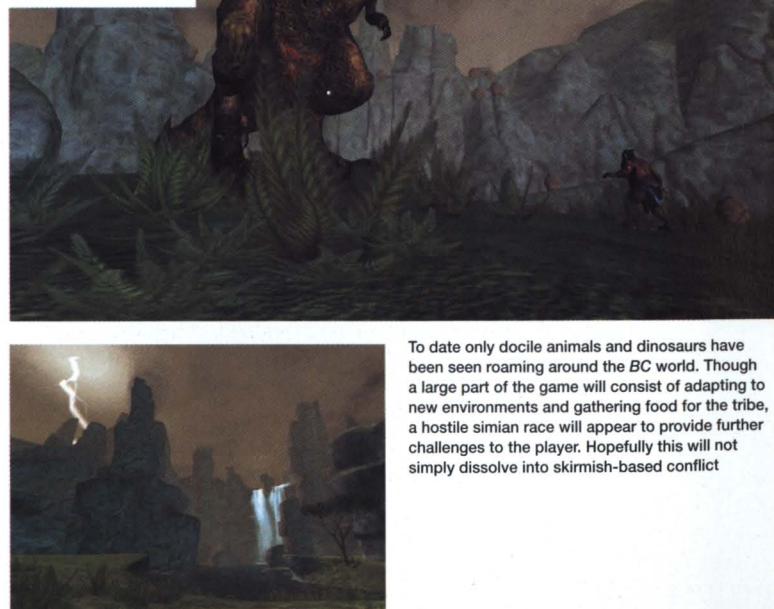
Fancy some food – dodo, perhaps? You can hunt down the animals with sticks and spears, or – as demonstrated at X03 – roll rocks on to them from the hills above. If your tribespeople see you successfully thinking around tasks, they'll begin to adapt and mimic your actions.

The *BC* world offers some stunning vistas and rich textures, but more impressive was the sight of a baby T-Rex lumbering over to the player's tribe and filling the screen. The battle was one-sided, with the T-Rex chewing up the characters and spitting them out in bloody rags. Molyneux hinted that the baby's mother (three times the size) would make an appearance later in the game.

The vicissitudes of weather will also be a major factor, with the player having to successfully see the tribe surviving wintry conditions and negotiate hot desert terrain.

A competing simian tribe will also be encountered, though Lionhead has been coy about revealing how this rivalry would play out.

While still early in its evolution, *BC* is beginning to look very promising – especially now that we know exactly what it's all about.



To date only docile animals and dinosaurs have been seen roaming around the *BC* world. Though a large part of the game will consist of adapting to new environments and gathering food for the tribe, a hostile simian race will appear to provide further challenges to the player. Hopefully this will not simply dissolve into skirmish-based conflict



Fable: the reality

It's one of the most talked-about Xbox titles in existence, and yet question marks still hang over *Fable's* beautifully rendered head. In an attempt to get some answers, **Equip** went directly to the man driving its creation

and the fantasy

While Peter Molyneux attends press briefings such as the recent X03 in southern France to show off the massively ambitious *Fable*, the game's lead designer, **Dene Carter**, co-founder of Lionhead satellite studio Big Blue Box, is back at the coalface in an office near Guildford attempting to make the magic actually happen.

Equip caught up with him to find out more about the less-glitzy side of being a game creator and why *Fable* is such an important project for Microsoft's console.

How much of *Fable*'s finished design will be down to specific nuances of the Xbox hardware?

It's not so much a question of design as lack of restriction and having access to a hard drive. The hard drive's allowed us to stream and store data invisibly, increase graphical fidelity, and make many processes far more subtle. If we were working on a PC we'd have the same benefits. On the other hand, if this were to come out on another console it would have to be an entirely different game.

So what would – or wouldn't? – *Fable* be if it was on another console?

There're several things we'd have to do on these machines: we're hefting around about four times the amount of graphical memory the Xbox can actually support at any one time through some nice streaming tricks, so that would have to go. The morphing would have to be handled in a completely different way since we can currently do some sly

processing on the blends when the player is busy looking at other things in the game, and quickly dump the results to hard disk. We'd also have to downgrade an awful lot of the AI processes in the game: our villagers are incredibly complex creatures with a large amount of opinions, motivations and so on. We're currently able to store these and dump them to disk for retrieval later. We'd obviously have to find some way to downgrade the AIs... Actually, can we stop this? It's getting depressing...



So has the Xbox game design experience been more or less the same as when creating a PC title?

The main differences between creating a PC game and a console game are the level of production values necessary, and assumptions about the player's 'minimum concentration time'.

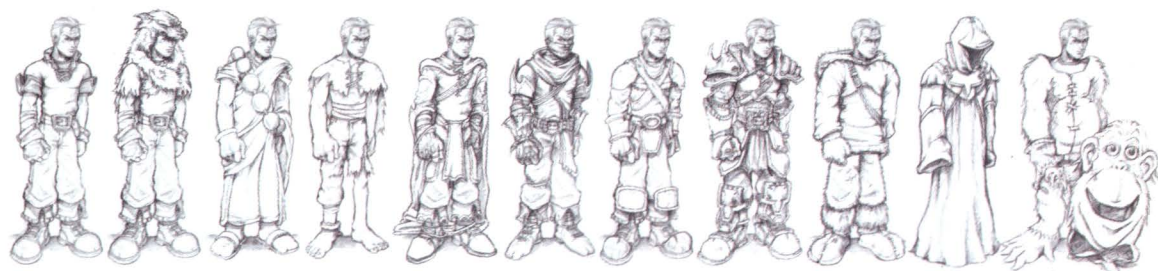
Creating a PC game usually allows a certain flexibility. Memory footprints can be exceedingly large, GUIs can be a little ropery, or information can be replicated in several places without marring the overall experience. PC gamers are usually fairly loyal to the subject matter, and willing to fight through outer 'roughness' for the prize within.

The console paradigm is far closer to other forms of entertainment. It's fast-twitch, fun-per-second, and fairly 'non-reflective'. Few players ask, "Erm... why on earth did he leap through that window? There's a perfectly good door over there!" when playing a console game.

On the other hand, if a console game sports one single ropery animation, or a door takes too long to open, or a cinematic isn't 'Hollywood grade' then the DVD rapidly finds its way into the second-hand bargain bin faster than vinaloo through a Bradford rude boy. It's a whole new set of challenges.

Did you initially have any ideas for *Fable*, before you saw the final Xbox hardware, that were eventually dropped because of restrictions?

Not at all. The biggest restrictions imposed have been due to time – yes, stop, I know what you're thinking – and a desire for clarity. The larger the game you create (in terms of the number of disparate elements), and the more non-linear it is, the harder it is to ensure that the player has a clear idea what to do, where to go, what is important and what isn't.



"The most difficult hurdle has been our imagination. We wanted to indulge every 'Why the hell hasn't this been done differently?' whim"

Apart from time, then, what other barriers have you come up against along the way?

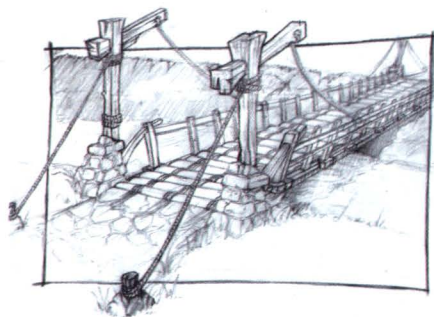
The most difficult hurdle has been our own enthusiasm. We wanted to create something truly special, to indulge every 'Why the hell hasn't this been done differently?' whim, and to eschew popular convention at every turn. The overall journey has been humbling, edifying, terrifying and breathtaking, emotional levels altering almost second by second. We feel quite spent...



Has anything actually proved easy?

The thing that came together easiest was the world itself. We said we wanted to create the most naturalistic and beautiful environment seen in a game, and we largely succeeded. This was primarily due to the power of the Xbox hardware, the brilliance of our engine programmers (Martin, Kaspar and Iain) and the work of our lead artist, Ian.

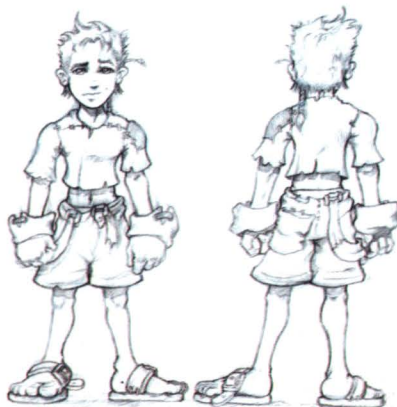
The vision we had for the game's world was realised very quickly, and it's been a constant source of inspiration.



Because *Fable* started out on new hardware, when and how did you decide to put a lid on what you were going to do with the game?

A lid?

OK, let's look at it differently. Has working on Xbox changed any part of the production process?



Production process? [Laughs.] Oh, thaaat. Yes, because the Xbox hardware has allowed us to create a larger game than we've ever worked on before, we've had to implement a fairly rigid development process quite late in the project. But I think this would have happened if we'd been producing the game for the PC as well, simply because of the sheer amount of assets we've created.

Were you ever tempted to introduce any form of Xbox Live functionality?

Yes. But time restrictions – and a desire to ship the game before the impending death of the MDs [smirks] – led us to consider that a luxury. Next time...

What is it about *Fable* that specifically pushes the hardware?

Sheer... volume... of... graphics. Hear that Xbox wheeze...



And what about in terms of pushing RPGs forward?

I'd like to think that once players have experienced a reactive world, static unresponsive environments will seem a little flat and antiseptic by comparison.

***Fable* clearly has an epic scale – do you think this is where all games should be heading?**

God, no. Epic scale is a pain in the butt. Something we've found while working on *Fable* is that if you want to make a game a really dense, enjoyable experience then 'epic' isn't what you want at all. You have to think tight and small, and work your way out from there.

What are the most important things you've learned throughout development so far?

Organisation does not necessitate creative stagnation. Producers do not have to be evil. 'Big' and 'scary' are interchangeable terms. And that good console games are really hard to finish.

What types of innovation do you think we'll be seeing from Xbox games in the future, as the format matures?

It depends on whether that Rez vibrating pad doohicky gets a second lease of life. No, Xbox Live is really rather cool – it's a very serious and directed approach to the online market, and I think we'll see some rather interesting results from the marriage of hard drive and online support.

And how many further games do you think you'll release on Xbox before the next iteration of hardware hits?

We'd like to do *Fable II*, but only time will tell.

How do you think Microsoft has handled its first entry into the console hardware market? Is there anything you think it could've done better?

I think Microsoft handled it the same way they handle everything: step one – naïve and ballsy; step two – humbled and observant; step three – serious and professional. I don't think they've even begun to get into their stride yet.

Finally, what Xbox games do you play yourself?

Play? Games? [Laughs.] Do you think we're on holiday? We're trying to finish a game here!

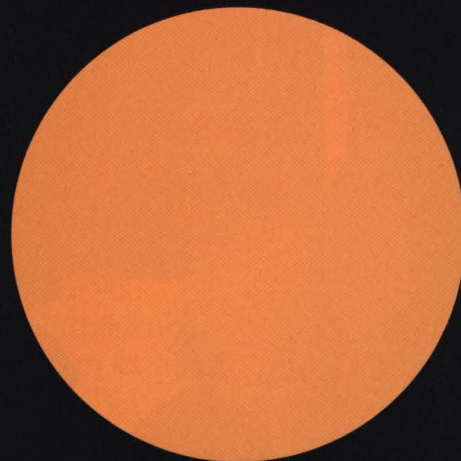
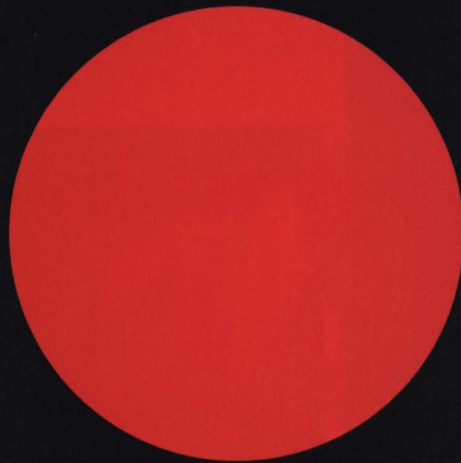


"Something we've found with *Fable* is that if you want to make a really dense, enjoyable experience, then 'epic' isn't what you want to aim for at all"



Dene Carter claims that the massive amount of assets created for *Fable* has resulted in many issues being tackled late into the project's cycle. But just how will it all fit together?





XBOX IS GO

Or: how a group of Microsoft employees convinced Bill Gates that the company should be making a videogame console – an exclusive extract from 'Opening The Xbox: Inside Microsoft's Plan To Unleash An Entertainment Revolution' by Dean Takahashi

The game strategy meeting with Bill Gates occurred in the boardroom at Microsoft headquarters in Building 8, an office building that looks like a couple of small letter "t"s connected at the tips when viewed from the air. The room wasn't ostentatious. It had a big oak table that probably looked chic in the 1980s. There were big black leather chairs with soft cushions, enough to seat about 20 people. There were no exterior views, so the executives meeting in the room could gather without fear of eavesdropping. One wall of the room was made of glass; that was the side that bordered the hallway that led to Gates's office. Outside the entrance, stacks of papers were piled high. Several executive assistants to Bill Gates controlled access in the waiting room.

The beauty contest

The atmosphere was nervous. The meeting was set up as a beauty contest. The Xbox presenters included the Four Musketeers (Seamus Blackley, Kevin Bachus, Otto Berkes and Ted Hase), who were joined by Nat Brown, Ed Fries, Rick Thompson (vice president in charge of hardware), David Cole (vice president in charge of consumer Windows), Jay Torborg (the director of multimedia), and Rick Rashid (vice president of research). Nat Brown was the appointed speaker for the Xbox side.

The other side included WebTV's Dave Riola, Tim Bucher, Bruce Leak and others; vice presidents Craig Mundie and Jon Devaan; and Ted Kummert, Chris Phillips and Harel Kodesh of the Windows CE group. Neutrals included Eric Rudder (Bill Gates's technical assistant) as well as a variety of other executives. The timing of the meeting was good. The scheduled recess in the antitrust trial had stretched from five weeks to more than three months. Gates wasn't distracted. Noticeably absent was Steve Ballmer, Microsoft's president.

Craig Mundie began the meeting, saying that everyone believed there was a threat to the PC business in the home because of the PlayStation 2. The question at hand was whether Microsoft would come "down from the PC" to do battle with the PS 2 via the

Xbox, or come "up from the appliance world" via WebTV.

Nat Brown gave the Xbox presentation first, with Blackley and Bachus piping up to bolster him. Hase stayed silent so he could be the observer. He wanted to listen so he understood what every person's position was. His job was to read the body language to figure out who was engaged or detached from what was being said and then tell everyone about it in the post mortem. Brown began talking about slides showing the Xbox's "guiding principles," which included taking advantage of PC volume economics. He said the Xbox would capitalise on Windows assets for its operating system. It would try to harness the enthusiasm of game developers and rely on existing technology. PC makers would launch the box in the fall of 2000 with a PC microprocessor, graphics from either Nvidia or 3Dfx, a network connection, a DVD player, 64 megabytes of dynamic RAM, and, most controversial of all, a hard disk drive. The box would run PC games and Xbox games. The machine's graphics would process about 50 million polygons per second, which was less than the PS2. But it would also be updated every two years, giving it a chance to leapfrog the PS2 and take advantage of new graphics technology.

Brown said the goals were to make money, expand Microsoft's technology into the living room, and create the perception that Microsoft was leading the charge in the new era of consumer appliances. The initial cost estimate was for a machine with a bill of materials (engineering talk for cost) of \$303. That machine would debut in the fall of 2000 and use a \$20 microprocessor running at 350 megahertz from Advanced Micro Devices. The machine would also have a \$55 hard disk drive with two gigabytes of storage, a \$27 DVD drive to play movies, a \$35 graphics chip, \$25 worth of memory chips, and a collection of other standard parts like a motherboard, and power supply. Over time, these prices would decline. The WebTV crew weighed in again with their objections. They said the hard disk drive was unnecessary and too expensive. Brown said hard disk drive prices were falling and that

About the author

'Opening the Xbox: Inside Microsoft's Plan to Unleash an Entertainment Revolution' author Dean Takahashi is a staff writer covering computer hardware and videogames at the San Jose Mercury News. He has been a business journalist for almost 15 years at Red Herring magazine, the Wall Street Journal, the Los Angeles Times, the Orange County Register, and the Dallas Times Herald. He has appeared as an expert on games and technology on CNN, CNBC and other media outlets. A resident of San Jose, California, he has been playing videogames since the release of *Pong*.

he had seen one priced as low as \$35. But Chris Phillips remembers thinking, "Oh great, you found a cheap hard disk on eBay and now you think that's what they cost."

The PlayStation2 didn't have a hard disk, though Sony was considering one as an add-on device. The WebTV team noted that Nintendo had planned to introduce a hard disk for the N64 as an add-on peripheral, but found it would cost as much as the box itself. But Ed Fries piped up and said that the hard disk drive was key to online gaming and it represented the next evolution in console hardware.

The must-have hard drive

"I believed the hard drive would fundamentally make online games possible, and make standalone singleplayer games more interesting," Fries said. "It was just the next evolution of console hardware to me."

The endorsement from Fries caught Gates' attention. Like Fries' boss, Robbie Bach, he trusted the opinion of Fries, who had earned respect because he had made so much progress in growing the games business. The hard drive could store far more data than the 64 megabytes of DRAM

rather than adding a hard drive. But Gates said he agreed with Fries. Blackley showed a demo of Bleem! software that could take a PlayStation game and run it on a PC to prove that the PC technology that would be used in an Xbox would be able to run console game code.

The WebTV team also said that there was no way that Microsoft would be able to create an Xbox operating system in time. But the Xbox team said they would adapt Neptune, a new version of the Windows 98 operating system, by focusing it on what was needed for gaming. The system would be less crash prone because the hardware would be stable and it would rely on known PC tools. The market target was the 29 million 16-to-26-year-old American males who were the fanatical core of gaming.

The Xbox team by now expected their project to cost \$500m, but they really had no good numbers supporting the estimate. A "business model" spreadsheet in the presentation showed that the team expected to sell 1.8m Xbox consoles in 2000, with steady improvement every year leading up to sales of 30.2m consoles in 2005. Microsoft itself would lay out \$226m in

For much of the meeting, Gates listened quietly. He asked how easy it would be to convert games from the PC to the Xbox and vice versa. Blackley said it would be easy to switch between PC games and Xbox games because of the common DirectX architecture. Game developers already knew the DirectX tools that would be used for Xbox games, so there was no tiresome learning process for them. The team hadn't really decided exactly what it would put inside an Xbox operating system and what subset of PC applications an Xbox would be able to run. The Xbox team figured they had to say the box would be PC compatible whether or not that was really the case in the end. Some of the team felt the box shouldn't run Windows, but they weren't prepared to tell Gates that yet.

"When we talked about PC compatibility for the Xbox, that came from the fear of Bill," Blackley said.

Ted Kummert, head of the Windows CE contingent, and Dave Riola of WebTV spoke for the other side. But when they started talking, the meeting time was almost out.

Riola: "We need to build a product that competes head-to-head with Sony. We

Some of the team felt the Xbox shouldn't run Windows, but they weren't prepared to tell Gates yet. "When we talked about PC compatibility, that came from a fear of Bill," Blackley said

chip memory in the rest of the box, or the mere 40 megabytes in the PS2. As such, it could store much richer graphic details. The hard drive was also 100 times faster at fetching data than a DVD drive fetching data from a DVD disk. Hence, game developers would be able to create extremely detailed models, and then transfer that data from the DVD disk to the hard drive as a cinematic clip was playing so that the player never noticed any delays. Such details could make game environments far more interactive and malleable than in current games.

Other chunks of the hard drive could be used to store saved games, so that users could pick up where they left off without having to plug a memory cartridge into the box. And the hard drive could store new levels for a game that could be downloaded from the Internet through the fast Ethernet connection in the back of the box.

Gates said he felt like the hard disk would help set the machine apart from the other consoles. Some debate focused on whether Microsoft would get more mileage by adding more chip memory, increasing it from 64 megabytes to 128 megabytes,

expenses in the project's first year, not counting the costs its manufacturing partner would incur. Microsoft did not plan to charge royalties to developers, and this was considered a perk that would get developers to defect from Sony, which charged them \$7 a game. Hence, Microsoft's cumulative loss for the first year was expected to be only \$169m. But by 2005, Microsoft's cumulative profit over five years was expected to hit \$913m. Microsoft's market share in the business could grow from 10 percent of annual sales in 2000 to 35 percent in 2005.

The early plan wasn't all that ambitious. It called for only 50 employees at first, largely because Microsoft would license and subcontract most of the work to others. The numbers weren't really an educated assessment of what it would take to succeed in the games business today. Rather, the numbers showed how naive Microsoft was in its initial expectations as it marched off to battle – much like the troops in World War I. It expected to encounter little resistance, not prolonged trench warfare. Don't worry, boys, we'll win this and be home by Christmas.

should embrace their business models."

The WebTV team described a subsidised console that would cost about \$183 and quickly fall to \$150 the year after launch. It would have no hard disk drive and would therefore match the other consoles on cost. Only such a console would do damage directly to Sony's business, they said. In contrast to the earlier proposal with non-PC components, this console now included a \$20 Intel-compatible microprocessor and a \$30 graphics chip from Nvidia. The highest-priced item on the list of materials was \$40 for memory chips. But the rest of the bill of materials was complete, down to \$2.14 for the cables and \$4.85 for screws.

"I'm concerned that we're not trying to take money away from Sony and we're not trying to build a new business for the future," Riola said.

What might have been

The WebTV box would also use Intel-compatible chips, but it would have a graphics chip that would be useful across a variety of devices, including WebTV, a game

'Opening the Xbox: Inside Microsoft's Plan To Unleash An Entertainment Revolution', which chronicles the entire story behind the console, is published by Prima Publishing, a division of Crown Books

console, and other appliances. Consumers could pay extra to get additional advanced television features such as WebTV's Internet service, high-speed Internet access or digital video recording. Microsoft would invest \$300m to design the console, spend another \$500m on marketing, and \$200m to build the machines. This effort could be a joint venture with Sega or Electronic Arts, but Microsoft might go it alone.

Riola said that Microsoft should take advantage of WebTV's world-class chip team to design the chips itself, rather than use technology from PC component makers. He said the console would be successful if Microsoft would throw things out of the PC architecture that weren't necessary in the console space. Kummert said the console could use the Dragon version of the Windows CE operating system that Sega was using. He said Microsoft should fund additional CE-based Sega games, and WebTV should provide Internet service for the Dreamcast in the United States.

"Windows CE is the only environment that provides predictability in the operating system," he said.

This software would be integrated with DirectX 8.0, the next version that Berkes would deliver after he finished DirectX 7.0. Berkes and Nat Brown looked at each other and raised their eyebrows. They were thinking the same thing.

Bill Gates detected the problem. Windows CE had to be made compatible with the upcoming version of DirectX 8.0. He interrupted the presentation and asked who was working on this project. Berkes, who was in charge of developing the latest version of DirectX, said to Gates that he didn't know anything about it. He would need a lot more programming resources to make sure that this conversion would happen and if done it would be a slow process. "It wasn't a credible claim" that Windows CE would be synchronised with DirectX anytime soon, Berkes said. The Xbox team had considered using Windows CE, but they dropped it as soon as they discovered the file size for CE programs was limited to 32 megabytes; they would have had to partition a hard drive into thousands of parts just to make CE run. Hence, the WebTV people didn't have a good software story. They hadn't had the presence of mind or resources on short notice to put together a demo that showed Windows CE working with a new version of DirectX. Gates also hammered the failure of Windows CE in the Sega Dreamcast.

"Tell me who used Windows CE in a Dreamcast game," Gates demanded.

Kummert had to reply that very few game programmers had done so. He and Phillips offered a half-hearted response about why that was so. Gates knew the matter all too well already.

The Xbox team countered that the WebTV plan to create a custom graphics chip from scratch would likely take too long to design given the short market window. Jay Torborg, Berkes' boss, thought that was the weakest part of the WebTV plan. Torborg had spearheaded a graphics chip project dubbed Talisman years earlier that ended in failure because designs for the chips ran horribly off schedule. By the same token, the WebTV team didn't believe that the Xbox could produce a version of their operating system in time to finish a box for 2000.

People power

Watching from the sidelines, Rick Thompson of the hardware group had taken a neutral stance in what he called the "peanut gallery." But he looked at the pedigrees of the players. Chris Phillips, Dave Riola and Ted Kummert had game market experience. Mundie and Devaan were high-ranking and seemed somewhat open-minded to Thompson in spite of how the Xbox team felt. WebTV's leader, Steve Perlman, was pretty much out the door. On the Xbox side, Blackley and his cohorts worked for technical stalwarts like David Cole of the consumer Windows group and his lieutenant Bill Veghte.

"These guys were known quantities," Thompson said his thoughts ran at the time. "Ted Kummert's group didn't have a deep keel. They didn't have a proven leader."

The strategy of Ted Hase was coming to fruition. He was beating the other guys by bringing more allies with heavyweight reputations to the fight.

Overall, Gates reacted more favourably to the Xbox team. "There is no doubt we need to do the PC-down approach. If we do anything, it will be more like the Xbox."

He liked the idea that the Xbox would run a broader class of software than the WebTV box, including educational software or productivity software. Gates wondered how the business model would work, and he asked the teams to do more work figuring it out. Craig Mundie asked if there was a role for a machine that didn't have a hard disk.

"I'd love to attack [Sony] from both fronts, but can we really hope to execute on both plans?" Gates said.

He worried that software providers would be confused because there would be "no continuity of message" coming from Microsoft on games. Rick Rashid, an early

convert among the executives and head of research, agreed that a two-pronged effort would have been confusing, fragmenting the game developers into camps.

Blackley was surprised that Gates seemed so engaged in the proposal, and he was relieved that Gates was even paying attention, given all of his big responsibilities, not the least of which was the government's antitrust case aimed at breaking up Microsoft. Gates had other worries as well. He wondered aloud if America Online planned to dive into the games space. AOL had already talked about an AOL TV service that it planned to launch with cable TV companies like Time Warner, its future acquisition target.

At the time, Blackley got the impression that Gates thought of the Xbox as a pet project, and a WebTV representative agreed that Gates seemed biased.

"The Xbox team had the right idea," Gates said later. "Empower the artists with a platform that inspires them to do amazing work."

Blackley saw from Gates's questions that the company had to work through a lot of problems quickly if it was going to get a box out in 2000. Bachus was disappointed that he didn't see a flash of the legendary Gates temper. "I was looking forward to classic Bill," he said later.

But the Xbox crew had convincingly covered many points. "Our argument was to start where the company was strongest, with PC technology and PC software code," Bachus recalled. Microsoft faced an immediate threat with the PlayStation2, and it needed to do something to stop Sony from taking all the hardcore gamers. If they failed to do that, then none of the other things would matter. And if WebTV's box spent its time doing a mix of functions, then it wouldn't do games well enough.

"Our goal needs to be to contain Sony," Gates said.

But Gates left a glimmer of hope for the WebTV team. He said he wanted a "common graphics architecture" between the PC, the Xbox and WebTV. He said this would enable devices in the home to take advantage of high-bandwidth connections. This fateful suggestion turned into a new form of the old Microsoft strategy tax, slowing down the Xbox again.

"The strategy tax was very real," recalled Eric Engstrom, the former Microsoft 'Beastie Boy' who had created DirectX and a few other Microsoft projects before leaving to start his own companies. "You never knew when the tax collector was going to come. You could be halfway done and then get hit with the tax bill."



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Edge – it's not for everyone

Ten things to do with your Xbox

A jukebox, a computer, a sadomasochistic instrument of torture – Microsoft's console is so much more than simply a machine on which to practice *Halo*. **Equip** examines ten projects to take your 128bit machine further

Post purchase, the smell of the packaging is the first sensory thrill. No, perhaps it's the second – the first is the feel of the virgin cardboard, shiny and smooth and seal still intact. When you get home you break that seal, open the box, and slide the polystyrene out, then the Xbox from out of that, out of its polythene bag and gently, carefully, on to the floor. It is black, but there are no fingerprints. It is unblemished.

Then you set about it with a screwdriver, a soldering iron, and (conceivably) an angle grinder, because as good as the Xbox is, it's simply not everything it could be.

The Xbox hacking community is driven by all manner of passions – intrigue, utility, mischief, Microsoft-baiting, and even just a simple love of games – and they've turned the Xbox into the most flexible gaming tool available. It began life as a machine for playing *Halo*. Now it has the biggest library of software ever seen on a console, with a back catalogue that makes the PlayStation blush; it can play movies and MP3s, stream media straight from the Internet to your living room; it can run desktop applications, act as a word processor or web browser. It is all things to all people, and all it requires is a little bit of DIY.

And perhaps some time spent wrestling with your conscience, or at least with the games industry's. Those who undertake the modifications detailed across the next ten pages will often find themselves in a moral no-man's land. For example, intellectual property rights. Everyone knows piracy is theft, and that practising or supporting the commercial reproduction of others' property is wrong. But is emulation malicious, even damaging? Whatever. There are legal ROMs out there, and **Equip** would urge you to seek them out.

Be aware, also, that as well as voiding your warranty and provoking the ire of Microsoft, some of the techniques detailed here could prove damaging to your reputation, wallet – anyone taking a soldering iron to a console should be fully prepared to indulge in the smell of fresh packaging all over again – or even your health. **Equip** accepts no liability, and presents this information only as a guide to what *can* be done. Should it? That's your call.



Turn it into an import-friendly Xbox!

Why?

Quite apart from the fact that it's a necessary addition in order to perform many of the other tricks mentioned here, getting your Xbox chipped allows you to circumvent Microsoft's region protection. While the machine's lack of success in Japan means this isn't quite as pressing a concern as it might have been, there are still a few import-only games that curious completists will want to own – *Bistro Cupid*, *Thousand Land* and *Shikigami No Shiro* for example. Then there's the advantage of being the first to sample certain titles. Importers have been enjoying *Soul Calibur II* for several months already.

Why not?

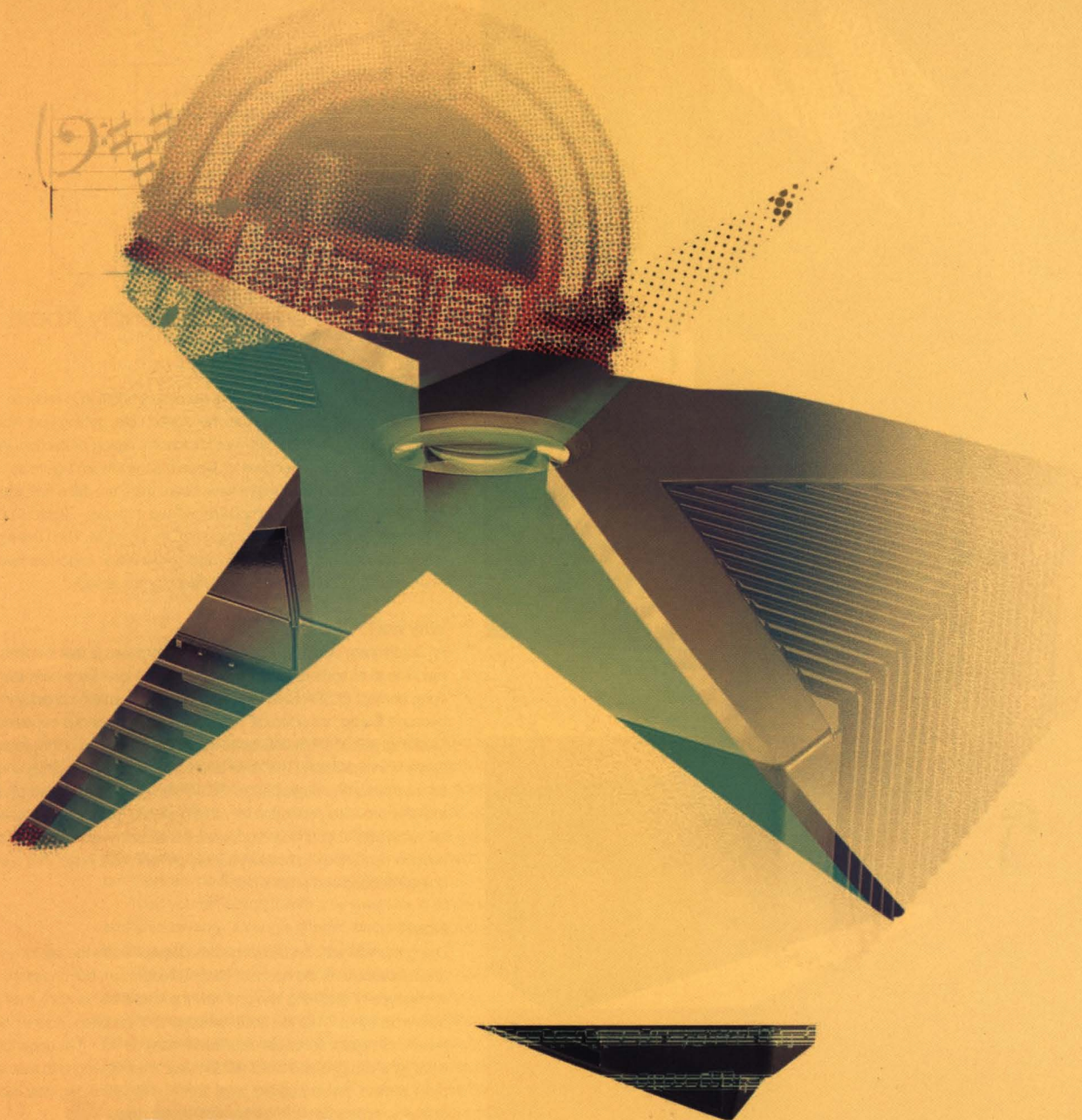
An unfortunate side-effect of the chipping process is that it opens your machine to all sorts of malicious piracy. If your intentions here aren't pure, contact ELSPA (www.elspa.co.uk) with a written confession, because **Equip** has no truck with that kind of poisonous behaviour. Modding your Xbox necessitates opening the case, and that voids your warranty immediately. The Xbox Live servers can detect chips and ban boxes from online participation. Some chips can be switched off, but this only provides protection for as long as you remember, and may still be vulnerable to dashboard updates. It's probably easiest to buy a second-hand Xbox to use as your experiment, and leave your current one untouched and pristine.

How?

Doing this yourself can be dangerous: **Equip** recalls the tale of an acquaintance who did hours of careful preparation, but chose the wrong type of soldering iron and saw the tracks on his Xbox melt away before his eyes. While the latest versions of chips often require only a handful of points, some can require as many as 30 – it all depends on what type you get, and what version your Xbox is. And with that latter point in mind, be very careful what sort of chip you order; later models of the console aren't compatible with earlier chips.

How much?

Presuming that you've already got an soldering iron specifically designed for electronics, chips should cost around £30. But if you haven't, **Equip** recommends asking around to find someone to chip your machine for you, which should cost about £50–60, chip included – although there are never any guarantees of vendor legitimacy, and the risk is entirely in your hands.



Turn it into a jukebox!

Why?

The best sound system in the house is often in the living room connected to the TV, and so it follows that most people have their stereos there. But music collections are increasingly MP3 based, and few stereos have that capability. You could link up your PC to your stereo, but it's probably in another room. Far better to take advantage of Microsoft's mini-PC, and the excellent Xbox Media Player. XBMP 2.4 installs on your Xbox's hard drive, and at its most basic level provides an excellent way of playing MP3s from the comfort of your sofa. But network support means it also streams Internet radio stations, plays all sorts of movie files including MPEG and DivX, allows users to look up film information on www.imdb.com, carries TV listings, and all manner of tiny pleasures. Plus it's constantly in development, meaning new features arrive regularly.

Why not?

Since the program is compiled using an unlicensed version of Microsoft's SDK, the binary is illegal, and owning it and using it is unlikely to be looked upon kindly by Microsoft. Downloading MP3s

from the Internet can be illegal, as is the procurement and delectation of some copyrighted movie files. Getting the network support to work requires a small amount of technical knowledge.

How?

Xbox Media Player is open source, meaning anyone can download the code, and, should they own an Xbox development kit, compile it themselves. If you're not that fortunate, finding a pre-compiled version is a little more tricky, since it's technically illegal to distribute. However, places do exist; if you're absolutely intent on finding it, **Equip** can only point you towards the more salubrious areas of the Internet.

How much?

After chipping your Xbox, free. Although you'll possibly need to invest some time in configuring it for your set-up.

Turn it into an arcade machine!

Why?

MAME – the Multi Arcade Machine Emulator – is great. Everyone should know this by now, and everyone with a home computer should own a copy. It lets your PC or Mac pretend to be all manner of coin-ops, producing arcade-perfect versions of long-dead classics. And now it's available for the Xbox, instantly expanding the machine's games library to over 2,000 titles. This is better than a computer, though; the natural interpolation on a nice TV lends all the arcade games that fuzzy chip-shop realism which even the nicest graphical filters on monitors can't quite recreate, it supports the Xbox pad perfectly, and you get to play it on a couch on a big screen. It's a glorious history lesson. The back button inserts coins with a ching. All the Neo-Geo games look gorgeous. Twin stick *Robotron* and fourplayer *Gauntlet* thrill forever. *Defender* is as hard as you remember.

Why not?

The same compiling and rights management issues mentioned previously. Also, the various versions of MAME and Final Burn Alpha released thus far only support ROMs up to a certain size, meaning some of the bigger games remain un-emulated.

How?

Once you've had your machine chipped and found the programs – either MAME-X or MAMEoX for the classics and Neo-Geo emulation, and Final Burn Alpha X for the CPS-1 and 2 games – and the ROMs, everything's straightforward. Copy the software across to your Xbox via a network cable. Boot up your Xbox and execute the program. Don't leave your sofa for several hours.

How much?

Nothing, but conceivably several weeks of your life lost to nostalgia.



Turn it into all your old consoles!

Why?

Equip's archival instincts are strong, something that takes its toll on living room space. But the advent of Xbox emulation has meant that at least some of the systems can be packed away, because pixel-perfect living room recreations of nearly all of the classic home computers and consoles now exist. In a similar way to MAME, these programs sit between the game image files and your Xbox, fooling them into thinking it's the old system, and allowing you to indulge in hundreds, thousands of titles you thought you'd never see again.

Why not?

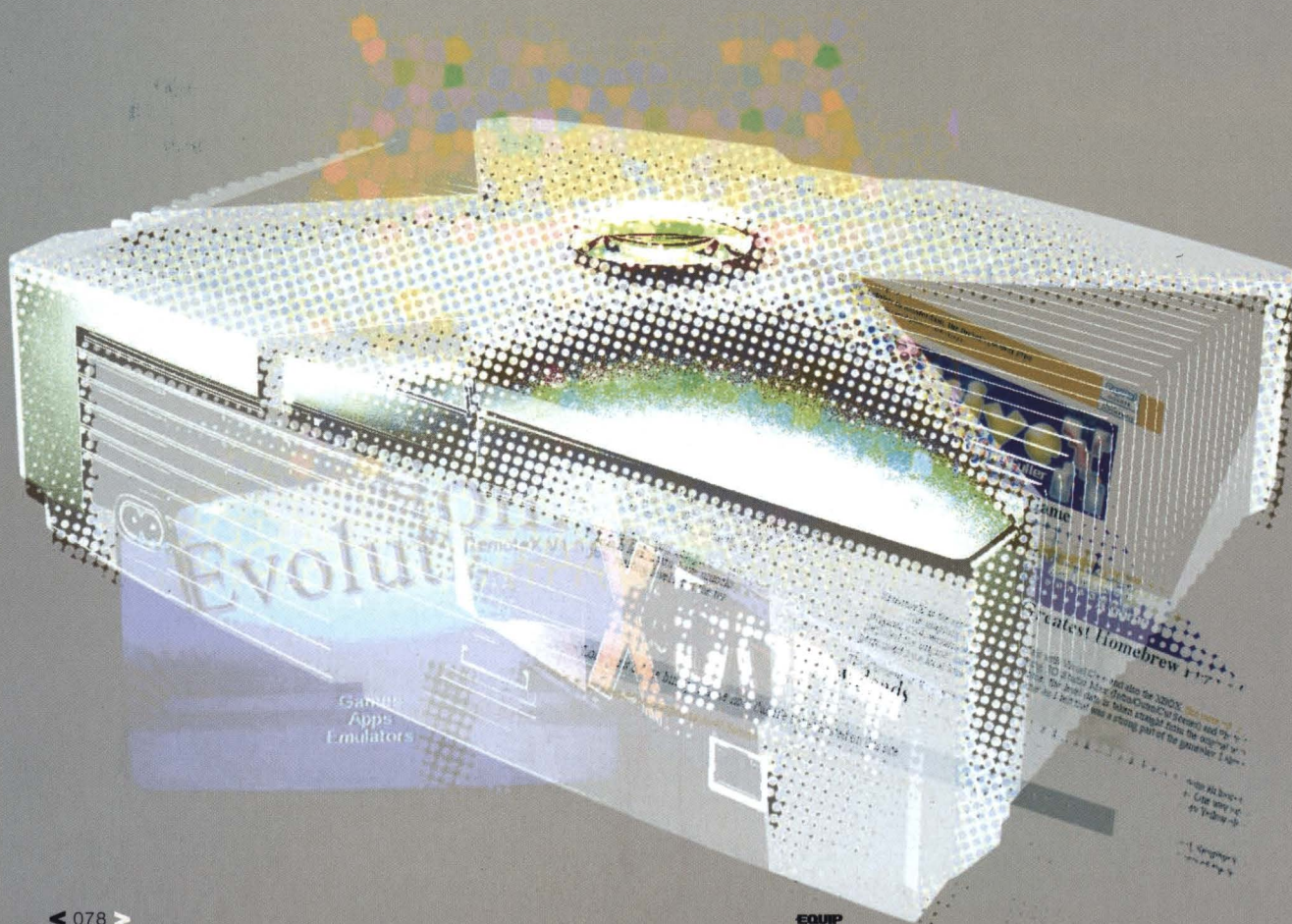
The Xbox's raw power means that some of the emulators stray close to what **Equip** would consider as the more nefarious side of copyright infringement – placing less emphasis on historical insight, and more on freeloading. In particular, the existence of GBA emulators within the Xbox scene is something **Equip** can't condone, and emulation of PlayStation and N64 is both patchy and conceivably inappropriate.

How?

There are dozens of excellent emulators, from everything to the early Atari systems up to the Amiga and through all the 8bit and 16bit systems in between, so it's down to personal preference which you choose to install and play with. As with MAME, doing so requires a chip, the game files, and that's it.

How much?

Nothing.



Turn it into a bigger Xbox!

Why?

The Xbox's hard drive drove Xbox hacking, because it gave storage space to homebrew coders for all their projects. But there's only around 10Gb of space to play with, and once you've turned the machine into a media station and retrogaming studio you'll soon find it fills up. Thankfully, Microsoft's use of standard PC components means that it's relatively easy to swap in a bigger hard disk, allowing even the most kleptomaniac of users to indulge in every possible Xbox whim.

Why not?

Large hard disks are very easy for Microsoft to detect on Live, and users who install them shouldn't expect to enjoy their online gaming on that machine for much longer. While the installation process is easy, things can go wrong, and making a backup of your original Xbox disk is an absolute necessity.

How?

Opening up the Xbox and installing a new hard disk is easy – it's like expensive Lego, with just a few screws and two cables separating you from storage heaven. Several of the Xbox hacking sites point readers towards hard disk 'installation' disks, which are inserted on first boot and do all the complex configuring automatically. That's how **Equip** managed it, and that's what **Equip** recommends.

How much?

A 120Gb disk – more than enough for most people, since it'll fit all the ROMs and emulators for all the emulated systems, arcade, console, and computer, and leaves plenty of space for other projects – will cost around £80.



Turn it into a mod-friendly platform!

Why?

This isn't just about taking the clothes off the *DOAX* girls – it's not even about skinning Christie in *DOA3* so she looks like Storm from 'X-Men'. Superficial alterations are fun, but there's also something here that allows players to extend the lifetime of ageing software. Not that *Halo* is ageing particularly gracelessly, of course, but those playing the hacked versions of *Halo* have been enjoying sneaking around as members of the Covenant, shooting down dropships, and jumping hundreds of feet in the air. Recent singleplayer hacks have given players the gravity gun and the flamethrower (although neither actually works). Multiplayer patch generators allow games with shotguns that fire Scorpion shells, or players who throw Warthogs as grenades. Playing *Battlezone* at Blood Gulch is now a real possibility.

Why not?

As with every tweak, there's a chance you'll break something. Not particularly in your Xbox, this time, as all the patches are relatively safe – but in the game dynamic. Like seeing the strings in a favourite puppet show, laying bare the mechanics of *Halo* can be a little disheartening. And given that the whole point of *DOAX* is accessorising, removing their clothes is a little pointless.

How?

Patches are applied to image files, meaning the first step is creating one from your *Halo* disk. Many tools exist to edit the *Halo* XBE, and since it's a particularly active section of the community, **Equip** recommends that you spend some time browsing the internet to find out the current state of play.

Cost?

Absolutely nothing. Except for the chip, obviously.





Turn it into a home computer!

Why?

Two main factors have driven the Xbox community's passion to get Linux installed on the machine. First comes the practical side. Having a (reasonably) small home computer in the living room could prove useful on several fronts, not least the ability to surf the Web, word process, and generally participate in all those things we pretend we're buying our PCs for when we really just want to play *Half-Life 2*. Secondly, Linux geeks loved nothing more than the idea of corrupting Bill's new project with their 'cancer', and it wasn't exactly a surprise when they succeeded.

Why not?

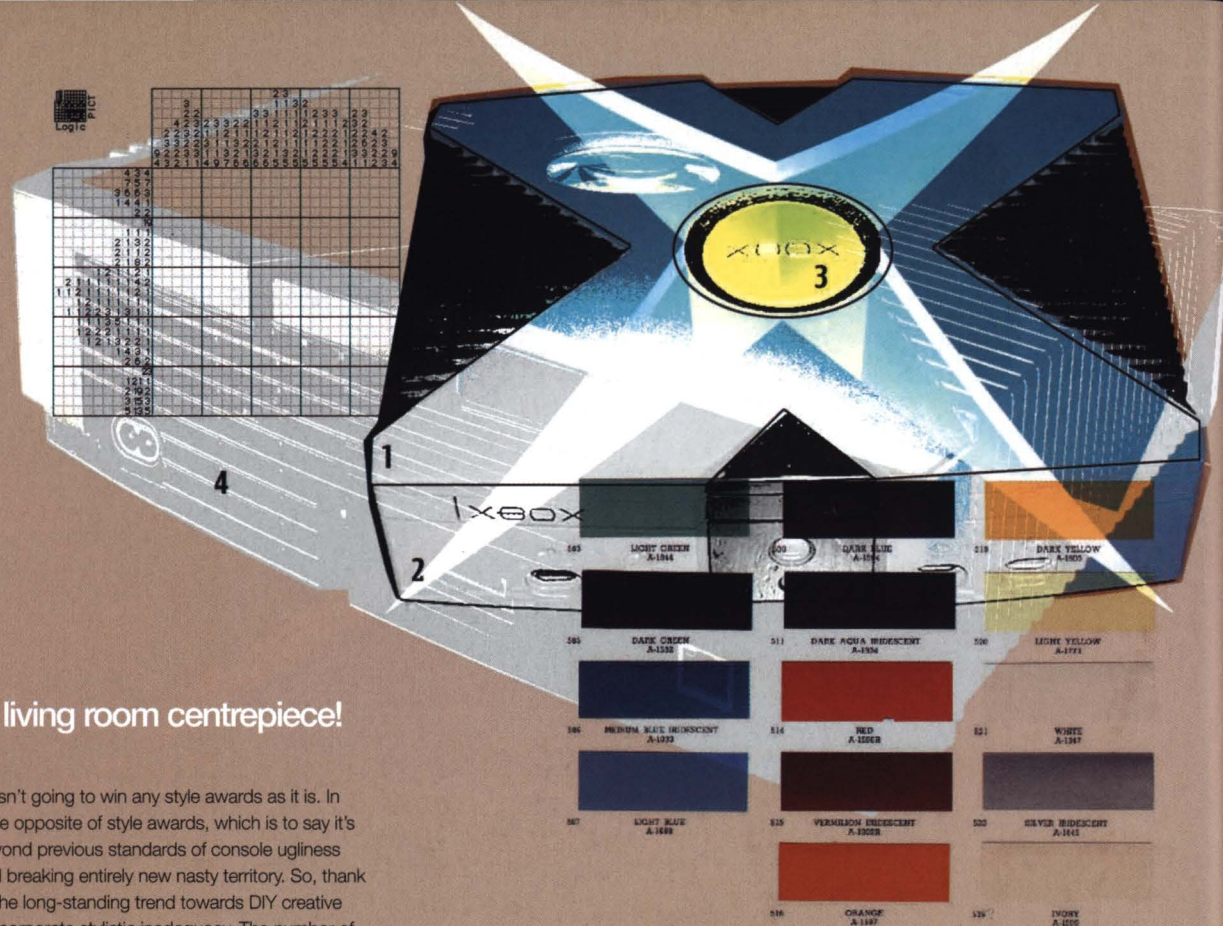
The peak resolution of PAL makes most computing tasks on TV slightly more arduous than they ought to be. And while the proliferation of free applications for the desktop environment is a boon, most people performing this task will already have some kind of computer in another room, and that's probably where their computing projects ought to stay.

How?

Those with chipped Xboxes can take advantage of the various preconfigured 'distributions' knocking around the Internet. Intriguingly, though, this is one case where machines don't have to contain an extra piece of silicon to take full advantage of the hack. By combining a hacked memory card with a copy of one of several fractionally bugged games (including EA's *007: Agent Under Fire* and Microsoft's own *Mechwarrior*), and soldering two points inside the Xbox, users can force an (almost) virgin Xbox to submit to Bill's biggest enemy.

How much?

Nothing if you own a chipped Xbox. The other method will cost a little more; the price of one of the broken games (£20, secondhand), and some device to get code from a PC on to an Xbox memory card (around £10-15).



Turn it into a living room centrepiece!

Why?

Because the machine isn't going to win any style awards as it is. In fact, it's going to win the opposite of style awards, which is to say it's quite horrific, going beyond previous standards of console ugliness (the 3DO, the N64) and breaking entirely new nasty territory. So, thank goodness for art, and the long-standing trend towards DIY creative butchery in the face of corporate stylistic inadequacy. The number of things it's possible to do with your Xbox goes beyond the scope of this feature, but if you've got time and devotion it's possibly to right all Microsoft's fashion wrongs.

Why not?

Because it voids the warranty, of course. Because you could cut yourself. Because you could make it end up looking worse.

How?

The guides to case-modding at www.xbox-scene.com are excellent, and cover everything from basic respraying to adding different coloured lights to full-on case remodelling. Most come with detailed pictures, so even if you're not brave enough to disassemble your kit, you can look at what someone else has done to theirs.

How much?

That depends on what you plan to do to the machine. Simple modifications shouldn't cost more than £10, but elaborate ones can end up costing much, much more. Particularly if you break your Xbox in the process.

Turn it into a homebrew dev system!

Why?

Equip can't support or justify the piracy of Microsoft's XDK, but a chipped Xbox does provide an opportunity to look at the work of those who have. An increasing number of people are using the system as 'The New Yaroze', porting old games such as *Doom* and *Quake* across and performing polygonal takes on old classics. And while no game is really worth the cost of chipping on its own – with the possible exception of the Xbox port of *Stepmania* – they're a welcome bonus, and possibly a glimpse at some of the coding talent of tomorrow.

Why not?

As mentioned, the games aren't particularly brilliant, but the potential for something as simple, instant and addictive as *Death Tanks* is there, and **Equip** follows developments in the community with interest.

How?

Binaries for the programs are hard to find, having been built with the XDK. But when they are, they're easily transferred to the Xbox, and generally run with no difficulties.

How much?

Nothing.

Turn it into an experiment in sadomasochism, and the pleasure/pain principle!

Why?

The Xbox controller is widely acknowledged to be pretty uncomfortable as it stands, but that's still not enough for some people. Providing the ability to arc a high voltage electric shock through your hand, this controller modification (featured on 'Tech TV', and subsequently in **Edge's** Out There section) is both dangerous and ludicrous, but does succeed in adding a little frisson to games of *Mortal Kombat*. Instead of a mild rumble-based jolt, when players are struck they experience actual physical pain.

Why not?

When players are struck they experience actual physical pain.

How?

Equip doesn't recommend you actually do this. Even accounting for Microsoft's long-rumoured IP death squads, it's definitely the mod most likely to get you killed. Still, if you must, follow the instructions located at www.techtv.com and follow them with patience and a lot of care.

How much?

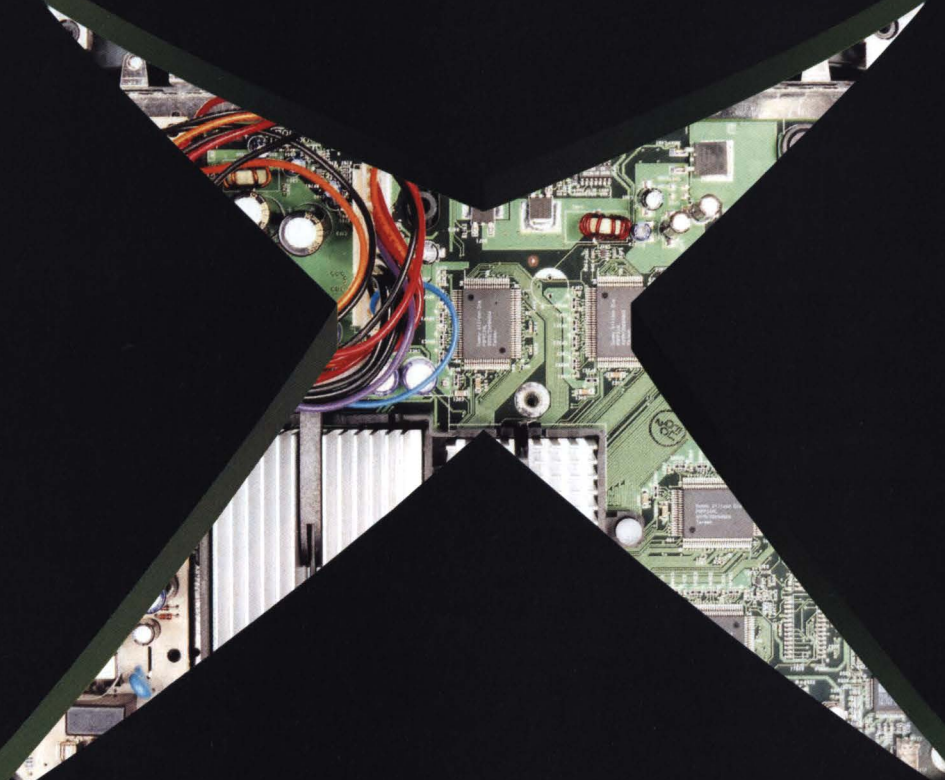
The shocking device on which the mod's based costs \$30 from the Web site linked from Tech TV's site, but clearly the modification could cost you much more, depending on your idiocy.



The background of the page is a dark, almost black, field filled with large, angular, green geometric shapes. These shapes, which resemble stylized 'X' or 'K' patterns, are layered and overlap, creating a sense of depth and movement. The green has a slight gradient, appearing brighter in some areas and darker in others, giving it a three-dimensional feel.

Building the box

Microsoft's move into the console war was characterised by bitter internal feuds and cut-throat competition from chip companies, but the pure vision of its creators won through. **Equip** looks at how the giant made a monster



A ccording to Dean Takahashi's book 'Opening the Xbox' (see excerpt, p68), the trigger for Microsoft's dramatic entry to the world of console gaming was a perceived challenge. "If Sony had kept their mouths shut, Microsoft would never have built a console in a million years," one insider told him. "Through their hubris, they moved us into action."

Of course, as justification for several billion dollars' worth of investment in an area in which the company had little experience, this statement is pure baloney. Akin to the local hardman's battlecry of "You looking at my bird?", such a fit of pique says much about the way Microsoft views itself. Despite being one of the most profitable companies in the world, it seems happiest when portrayed as the underdog in a world full of hungry wolves. Instead, it doesn't take much reading between the lines to see what really worried Microsoft's top brass was that Sony's success with game consoles would

give it a stranglehold over a key emerging business opportunity, which Microsoft itself had struggling to get to grips with.

Back in the late '90s, with the Internet boom still in full force, industry analysts predicted the connected box which sat next to the living room TV would be the key to the online revolution. Games, films, music and interactive TV would all be piped into the living room through the box; thus the company that owned the box, owned the future. Microsoft's previous mission statement, "a PC on every desktop", meant little in this context of sofas, scatter cushions and coffee tables. And with PlayStation the dominant game console, Sony's triumphant announcement of PlayStation2, which was then widely seen as a Trojan horse for such online services, was the spark which lit the blue touch paper of Microsoft's alarm. It's easy to imagine things kicking into gear, as, according to Takahashi, Sony had previously rejected Bill Gates'

request to use Microsoft's development tools and operating system in PlayStation2.

Boxing clever

But if Microsoft's initial interest in game consoles had little directly to do with games, it isn't to say the company hadn't dipped its toe into the cut-throat sea of computer games prior to Sony's PlayStation2 announcement. With its PC games division a growing and profitable (if still tiny) part of its empire, the company had also spent time and money investing in DirectX, a set of development tools for PC games. After some rocky early years, DirectX became the de facto standard for most PC game development in the late '90s.

Microsoft had provided a streamlined version of its Windows CE operating system and development tools for Sega's Dreamcast console, too. Yet with the exception of developers creating games with a network

component, most had chosen Sega's tools over those offered by Microsoft.

Although that power play failed to materialise into the predicted Microsoft buy-out of Sega's hardware team, there was another division within the company which had experience of building multimedia hardware. Back in 1997, Microsoft had bought set-top box company WebTV Networks in order to try to gain access to the domestic gateway. Since then it had been losing hundreds of millions of dollars trying to sell the hardware and its associated online services to cable TV subscribers. Interestingly, the business model for interactive TV was similar to that of the console. The initial high cost of hardware was subsidised, with profits being generated over time through content – in this case, a monthly service subscription.

This meant that when Microsoft's top brass finally made the decision to investigate the

What's in the box?

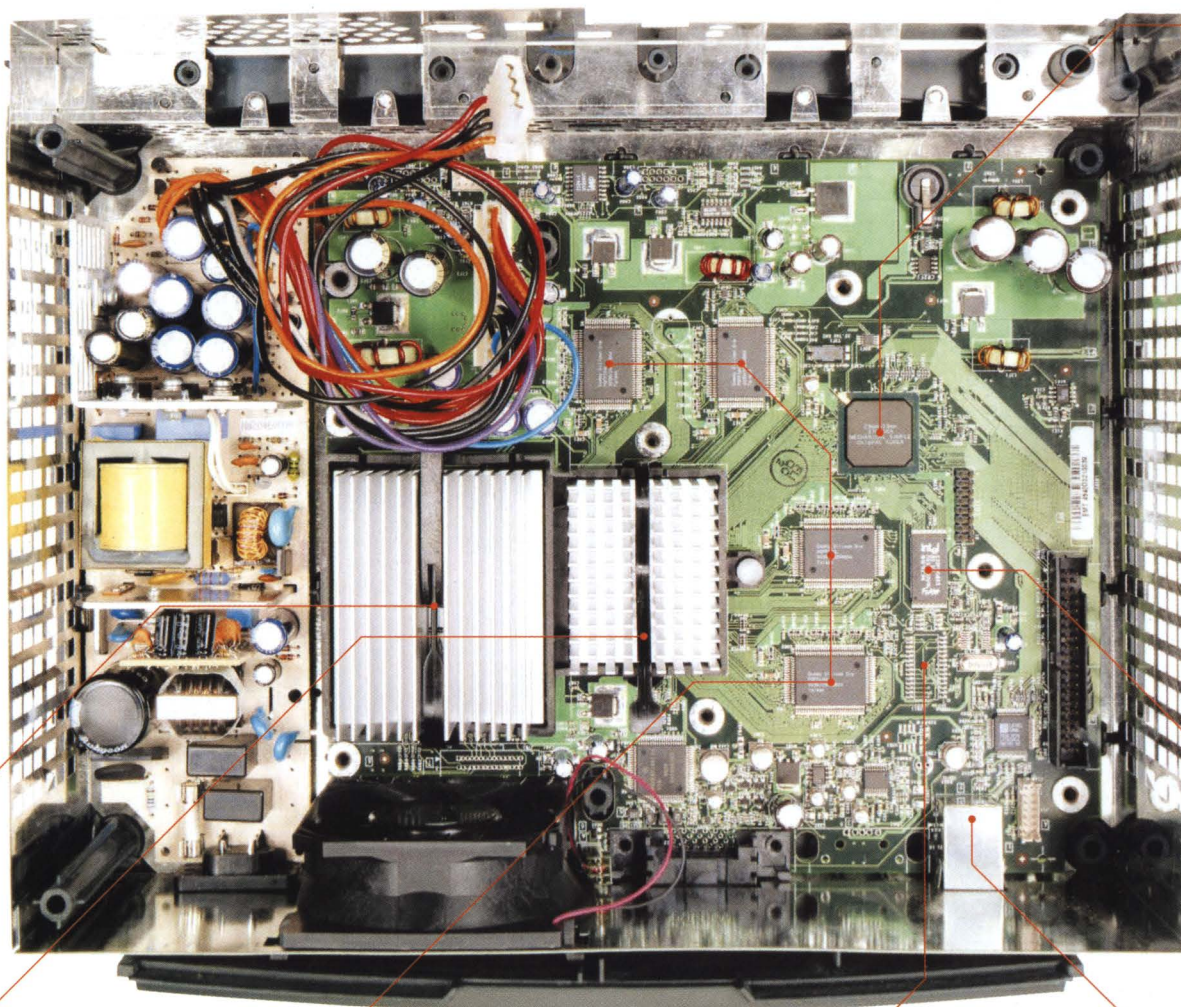
It might be the most powerful console available, but with the top removed Xbox looks much like a standard PC

Central Processing Unit (CPU)

Usually covered by a large heat sink, Xbox's CPU is a cheap and cheerful 733MHz Pentium III-class chip, which because of some modification is broadly equivalent to Intel's mobile Celeron CPU. It's connected to the graphics chip via a standard P6 64bit 133MHz frontside bus.

Graphics Processing Unit (GPU)

Designated NV2a by Nvidia, Xbox's graphical grunt is provided by a modified version of its PC GeForce3 architecture. One important difference between NV2a and GeForce3, however, is the Xbox's unit integration of the so-called northbridge architecture. In most PCs, the northbridge is a series of chips which connect the CPU to its Level 2 cache memory, as well as the main system RAM. The singular nature of Xbox as a games platform means it's easier and cheaper to integrate the northbridge functionality directly into the graphics chip. Like the CPU, the NV2a, which runs at 250MHz, is also covered by a heat sink. Extra cooling, which is required because of the sheer thermal energy produced by its 50m-odd transistors, is provided by a fan.



Unified Memory Architecture

One of the advantages of the integration of the northbridge architecture is that both the CPU and GPU can share the available memory, instead of each processor having its own dedicated block of RAM. Known for this reason as unified memory, Xbox has 64Mb of 200MHz DDR SDRAM (double data-rate synchronous dynamic random access memory). This is physically split into four blocks on the motherboard, shared via a 128bit bus with an effective bandwidth of 6.4Gb/s. Unified memory gives developers more flexibility when deciding how they want to allocate Xbox's system resources between the CPU, GPU and sound chip. The downside however is that in certain circumstances, contention issues can arise as systems try to access the same bit of memory simultaneously. For this reason, it's often more efficient to split the RAM into two blocks which are accessed independently through a switching network.

Hard Drive (not shown)

The most contentious Xbox component during its development was the hard drive. Expensive and potentially prone to failure, it was finally included only after firm backing from top Microsoft executives. Two makes of hard drive are used in Xbox – a Seagate 10Gb drive and a Western Digital 8Gb drive. Despite the different sizes, all Xboxes are limited to using only 8Gb. The hard drive's file-management system allows up to three games to soft install on the disk, making them quicker to load, as well as the usual array of save game, downloadable content and other miscellanea such as music files. Developers can also use the hard drive as a huge, if slow, scratch pad for the temporary storage of game data – streaming textures, for example.

System Management Controller (SMC)

Although not directly involved in gaming, this small 8bit processor is crucial in terms of keeping the Xbox running properly. An integrated package including a processor, as well as both RAM and ROM components, the SMC controls the initial electrical operation of the console, notably the status of the power button and the DVD eject. For this reason, if the Xbox is plugged into the mains power supply, the SMC is always on standby power. It also acts as a basic health check for the CPU and is able to reboot it when it crashes.

Media Communications Processor (MCPX)

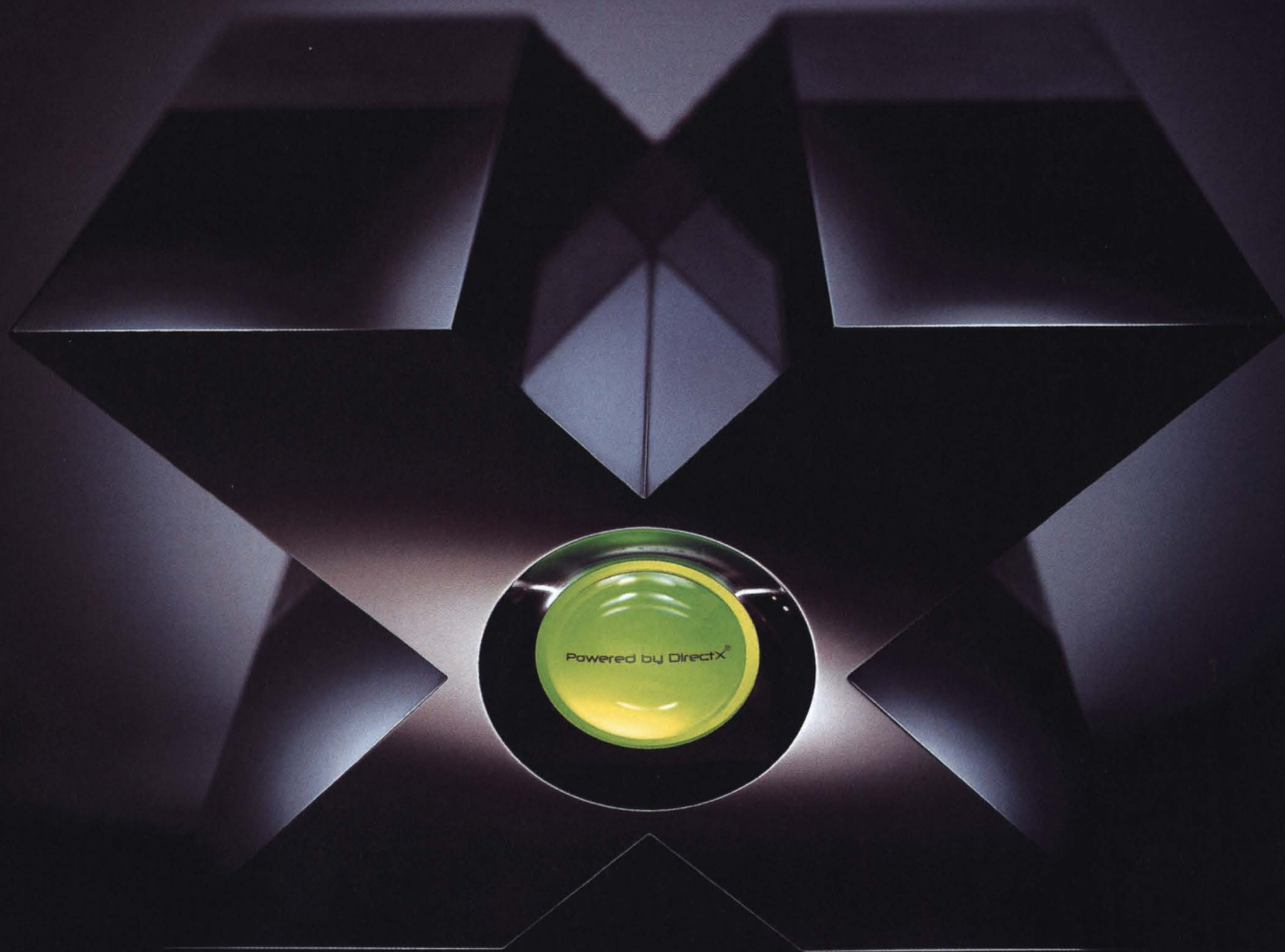
The most technically advanced chip in Xbox, Nvidia's MCPX, which is based on its nForce PC chip, fulfils the role of the standard PC southbridge architecture. Typically southbridge consists of a single chip which controls a computer's input/output functions, such as audio, controllers, USB and serial connections. One of the key features of the MCPX is its audio capabilities. Using technology licensed from Dolby, the MCPX supports the decoding and encoding of Dolby Digital 5.1 sound streams. Also included is Sensaura's 3D audio position technology. Combined, the result is a processor which is far superior in capability compared to the competition, being able to support up to 64 channels of 3D sound and 192 channels of 2D sound simultaneously (or 256 channels of simultaneous 2D sound). Other roles carried out by the MCPX include controlling the switching network for the unified memory as well as handling the ethernet networking, access to the hard drive controller, DVD drive, the four USB controller ports and various other management systems. The MCPX is connected to the NV2a by Intel's fast, narrow 8bit HyperTransport bus technology. This provides an effective bandwidth of 400Mb/s in each direction.

Read-Only Memory (ROM)

As its name suggests, ROM is persistent memory which, unlike RAM, doesn't require any power in order to retain data. For this reason, the ROM chip stores Xbox's initial starting-up program, as well as being partially responsible for the console's security system. It's the main focus of the reverse-engineering efforts of the legions of hackers who want to run unofficial software, such as the Linux operating system or PC games on the console.

Ethernet

Controlled through the MCPX, Xbox's connectivity is provided by the industry-standard 10/100Mbps Ethernet broadband technology.



possibility of a PlayStation2 killer, during a three-day-long strategic retreat in March 1999, it was the WebTV team who took control of the project. It proposed a typical set-top box approach, using WinCE as the operating system, a cheap already-commercially available CPU and motherboard, with graphics output handled by an internally-designed chip.

This custom graphics technology had the advantage of allowing Microsoft to redesign the box's innards, integrating chips together and hence making the hardware much cheaper over its lifetime. The problem was that such a concept would be underpowered in terms of gaming performance compared to PlayStation2, partly because it was also designed for Web browsing and other non-gaming applications. So when a hardcore gaming proposal emerged from an ad-hoc

group of four Microsoft employees, consisting of Ted Hase, Otto Berkes, Seamus Blackley and Kevin Bachus, the project, known as the Windows Entertainment Platform, was split by Gates into a beauty contest between the two rival factions.

Enter the gamers

The spark of inspiration for what became the Xbox was the gang of four's aim to provide developers with the easiest-to-program, most powerful games hardware possible. Combining pure games functionality with Microsoft's DirectX development tools and vanilla off-the-shelf PC components fulfilled this goal. This allowed Xbox to be created quickly, albeit with the downside of reducing Microsoft's ability to control hardware costs. Although the cost of such components would drop over time, using

different vendors meant that it was impossible to integrate the chips together. In contrast, Sony chose to design most of its chips in-house. This meant it could aggressively drive down the price of its hardware by up to two thirds during its lifecycle.

The Xbox team hoped the gaming functionality included in its proposal would overcome such problems, however. The two crucial components in this respect were Xbox's relatively expensive hard drive and Ethernet broadband connectivity. With Sony and Nintendo only offering to release similar bolt-on components for their consoles at an indeterminate time in the future, the Xbox team felt it provided a clear technical advantage as well as a strong media message. There was the possibility of generating new revenue streams via online subscription models, too.

As has been pointed out by more than one refugee of the corporate jungle, when colleagues spend more time trying to kill off their internal rival's projects than those of their company's supposed competitors, you know things aren't right. And despite the perceived arrogance of Sony, which had sparked the whole program in the first place, the antagonism between the two Microsoft teams was fierce.

In one meeting, the Xbox boys got knocked back for not detailing the cost of screws in their bill of materials, whereas they, in turn, ridiculed their opponents' lack of gaming experience and contacts with developers. The stakes were also raised as each team had its own set of champions within the Microsoft hierarchy. The Xbox team got full support from Ed Fries, head of Microsoft's PC games division, particularly

However, as the blueprint came together, the choice of the graphics component became the real stumbling block. The simplest and cheapest option was to pick an off-the-shelf component such as Nvidia's GeForce2 chip. The company was offering a version of next-generation technology, GeForce3, too, while ATI's similar R200 was another option. It all boiled down to a balance between cost, timing and performance. It wouldn't be possible to hit Xbox's proposed launch date of the autumn of 2000 with GeForce3. Even though it was expensive, there was a feeling Xbox wouldn't be impressive enough when compared to PS2 without its power. Eventually the decision was made to postpone the launch for a year.

Ironically, the delay merely provided an opportunity for the resumption of internal disagreements within Microsoft. Thanks to a licence signed with graphics technology

it Easy to program and offering the most power for the least work, only now is the Xbox's full potential being unlocked with Xbox Live

with respect to its inclusion of the hard drive. Meanwhile, Craig Mundie, who had been responsible for WebTV's acquisition and was initially in charge of the PS2-killer project, favoured the set-top box approach.

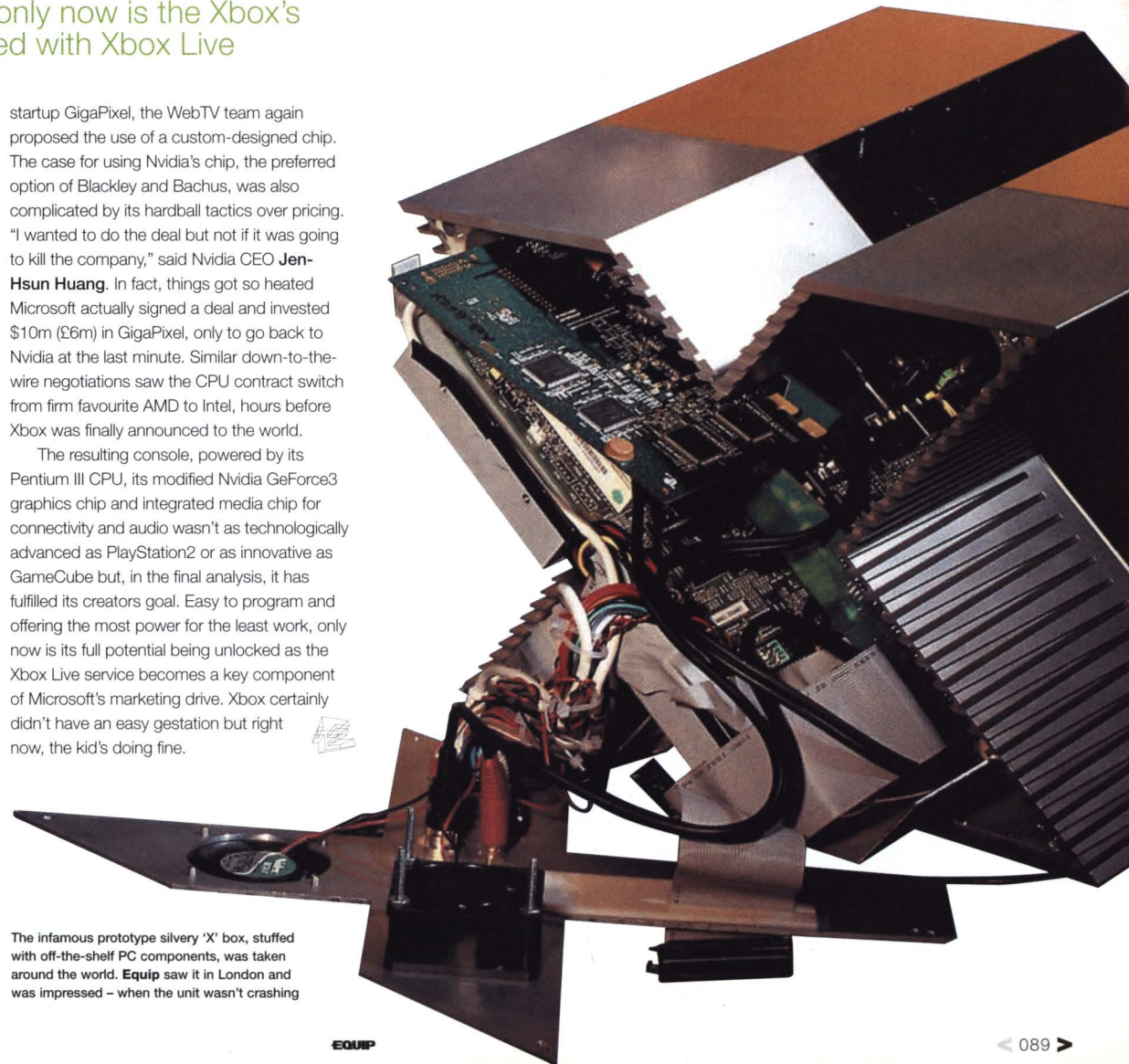
The crunch came in May 1999, when both teams had to submit their proposals to Bill Gates. The Xbox team gave the better presentation, although the meeting ended in a certain amount of indecision. Gates asked for further investigation into the possibility of a shared architecture between Xbox and WebTV (see p68). This set up the next battlefield between the two groups – the choice of graphics chip. With in-house expertise in chip design, the WebTV team felt it could provide a cheap, custom unit. But its hardcore team wanted the best component available, which at the time was Nvidia's GeForce2 PC part.

This low-level internecine discord continued over the summer of 1999, even spilling back into the Xbox team which itself suffered from disagreements. Some wanted Xbox to run standard PC games, as well as specifically designed software. Others, lead by Blackley and Bachus, pushed for the traditional dedicated console model. More issues were brought into rude focus as what had once only been plans became concrete details. One shocker for some within Microsoft was the decision not to use a full version of the Windows operating system. Potential problems with stability, as well as the speed of booting up meant Xbox used a cutdown version of Window NT instead. This effectively destroyed the potential for future use of the console as a Trojan horse for non-gaming applications.

startup GigaPixel, the WebTV team again proposed the use of a custom-designed chip. The case for using Nvidia's chip, the preferred option of Blackley and Bachus, was also complicated by its hardball tactics over pricing. "I wanted to do the deal but not if it was going to kill the company," said Nvidia CEO **Jen-Hsun Huang**. In fact, things got so heated Microsoft actually signed a deal and invested \$10m (£6m) in GigaPixel, only to go back to Nvidia at the last minute. Similar down-to-the-wire negotiations saw the CPU contract switch from firm favourite AMD to Intel, hours before Xbox was finally announced to the world.

The resulting console, powered by its Pentium III CPU, its modified Nvidia GeForce3 graphics chip and integrated media chip for connectivity and audio wasn't as technologically advanced as PlayStation2 or as innovative as GameCube but, in the final analysis, it has fulfilled its creators goal. Easy to program and offering the most power for the least work, only now is its full potential being unlocked as the Xbox Live service becomes a key component of Microsoft's marketing drive. Xbox certainly didn't have an easy gestation but right now, the kid's doing fine.

The infamous prototype silvery 'X' box, stuffed with off-the-shelf PC components, was taken around the world. **Equip** saw it in London and was impressed – when the unit wasn't crashing



Power with control

Designed to allow developers to use their experience of the PC but with all the advantages of a fixed console, Xbox really is a dream machine



Although Computer Arts' *The Thing* was released across several platforms, it really shone on Xbox, using its full capability for effects such as dynamic lighting

Let's face it – game developers love complaining about the hoops console manufacturers force them to jump through, particularly if this means they can talk at length about the clever hacks they've discovered to get around the problems. Start them off on the subject of trying to unlock the mysteries of PlayStation2's VU0, or even the delicate balance required by GameCube's hardware, and it's hard to stop the flow. Xbox, however, was designed to make their lives easy, and frankly where's the fun in that?

Even those coders involved in crafting early technology demos for Xbox found the process relatively painless. **Julian Davis**, technical lead at Kuju, was one of the first UK developers to get his hands on the pre-release Xbox development kits, as the studio worked up its

"The first devkits were basically just a PC in a silver box but we were up to speed and had our custom engine running in a couple of weeks"

Tao demo for show at E3 2000. "The first Xbox devkits were basically just a PC in a silver box with a few custom libraries and a gamepad controller," Davis recalls. "But we were up to speed immediately and had our custom engine running in a couple of weeks."

The team found the transition to the final release devkit equally smooth. "There are enormous advantages of using mature PC development packages such as Microsoft's Visual Studio and Intel's VTune," says Davis,



One of the standout Xbox titles, demonstrating both the console's power and ease of programming, has been Climax's *MotoGP* franchise. The developer converted a PC version to the Xbox in less than two days



Although the gulf between early Xbox titles and current ones isn't a wide as say with PlayStation2, it's still clear that developers are finding ways of pushing the technology – witness Codemasters' excellent *Colin McRae Rally 4.0*

by way of explaining the lack of gremlins within the Xbox development process. The help documents, sample code and support provided by Microsoft were generally considered excellent by most developers, too: this in stark contrast to the hands-off policy which Sony operated during PlayStation2's early days.

Shawn Hargreaves, lead programmer on Climax's *MotoGP* series, also ranks Xbox development highly. "Our first Xbox devkit turned up late one Friday evening," he says. "We already had *MotoGP* working on the PC but I had it running on Xbox by the end of Sunday – not bad going for a completely new hardware platform. Xbox is by far the best development environment I've seen on a console. The tools are simple, powerful and well documented, and perhaps most importantly, reliable, too."

Derek Morris, principal programmer for Codemasters' *Colin McRae* franchise can't even think of any major problems developing for the console. "All the headaches come from other platforms," he quips.

The power of X

Whether it knew it at the time or not, certainly in retrospect, one of Microsoft's key decisions when designing Xbox was switch from a 2000 to a 2001 release date. For, although this meant the company could use Nvidia's GeForce3 graphics architecture, this, in turn, relied on Microsoft's DirectX 8 technology. This was important as DirectX 8-class hardware marked the big evolutionary spurt in the world of

computer graphics. As well as offering the usual increase in polygon-pushing power compared to their predecessors, such architecture also allowed developers to balance the workload between the CPU and graphics card much more efficiently than before. Much of the heavy graphics work could be done on the graphics card instead of the CPU, as had previously been the case.

"Running the visual effects on the graphics card frees up the CPU for doing work such physics and AI processing," says Morris, pointing out that such tasks are particularly important for simulation-style games such as *Colin McRae*.

Another advantage was the ability for developers to control the visual look of their worlds in a precise manner. Known as vertex and pixel shaders, these are small, easy-to-program code snippets which tell the graphics card how to process the information being sent to it by the CPU. They have proved to be one of the main advantages of the Xbox over its competition.

"From a performance point of view shaders mean you can load-balance more effectively, as you can offload tasks such as skinning and bump mapping partially or wholly onto the GPU," says **Mark Atkinson**, technical director at Computer Artworks. But he reckons it's the graphical effects they enable that are crucial. "The real benefit is the extra control you get," he enthuses. "You can create your own lighting models, cook up groovy custom effects, and generally give your game its



Thanks to its early hands-on experience, Kuju's first proper Xbox title, *Lotus Challenge* (left), was one of the early pace-setters. As an Xbox-only title, *Just Add Monsters' Kung Fu Chaos* could take full advantage of the hard drive for streaming. It also heavily relied on pixel shaders for its visual style (below). The first UK studio to get its hands on pre-production Xbox devkits was Kuju, which created its Tao technology demo for E3 2000 (bottom)



own unique look without compromising the framerate."

One developer that really went to town using such effects was Just Add Monsters. Its Xbox debut, *Kung Fu Chaos*, published by Microsoft, used shader effects to create a highly stylised look. "Most developers use shaders to clean up their images and add sparkle, whereas we used them to dirty things up, colour de-correct and create depth-of-field effects by blurring the scene," explains JAM's technical director **Mike Ball**, proving the flexibility of the system once in the hands of developers.

Working the drive

The additional programmability provided by Xbox may have gone down well with the development community, but the success of another of Microsoft's more controversial decisions has proved less clear-cut. "The hard drive is good for speeding up load times, and makes other consoles that need external memory units seem rather archaic, but it hasn't exactly revolutionised gameplay," reckons Hargreaves. "It's cool but it was massively over-hyped by the marketing."

According to Morris, one explanation for this is that the hard drive is only useful for Xbox-only titles. "As we develop for multiple platforms it isn't feasible to have dramatically different designs and therefore we don't use the hard drive that often."

It's a theory born out by the experience of Just Add Monsters' Xbox-only *Kung Fu Chaos*. "For us it's been an absolute godsend. It never

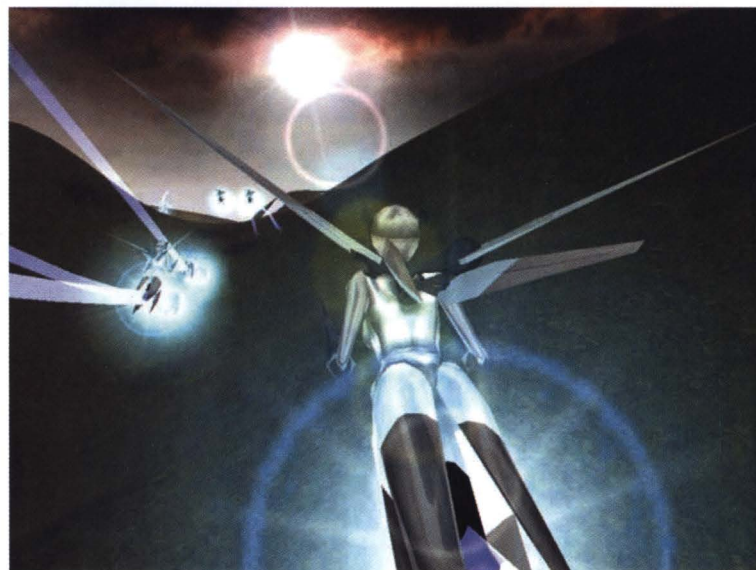
gets a rest," says Ball. "We use it to spool music, as well as environmental audio and sound effects dynamically allowing us to have a greater range of high-quality Dolby 5.1 surround sound and a much larger repertoire of speech for the characters."

The one area in which the hard drive could still prove its overall worth, however, is Xbox Live. "The really significant uses of the hard drive have yet to make an impact, but they will arrive. Xbox Live is beginning to take off, and the PlayStation2 hard drive will be launched early next year. Both of these will start increasing the pressure on publishers and developers to make use of console hard drives more aggressively," reckons Kuju's Davis.

Ball also hopes to exploit the hard drive to push the graphical quality of future games. "I'm sure there's much more that could be done with extremely high detail environments that are spooled directly from the hard drive making sure that the GPU is constantly pushed to its limits," he says.

And in some ways this is an important concern for future Xbox development. Perversely, one potential downside of its ease of use is that there's less unexploitable performance to be unlocked by the third- and fourth-generation games.

For that reason Davis doesn't expect the difference between generations of games to be as significant as on the PlayStation2, although he does expect to get some boost. "I think the quality of Xbox games will improve over time," he muses. "Learning the

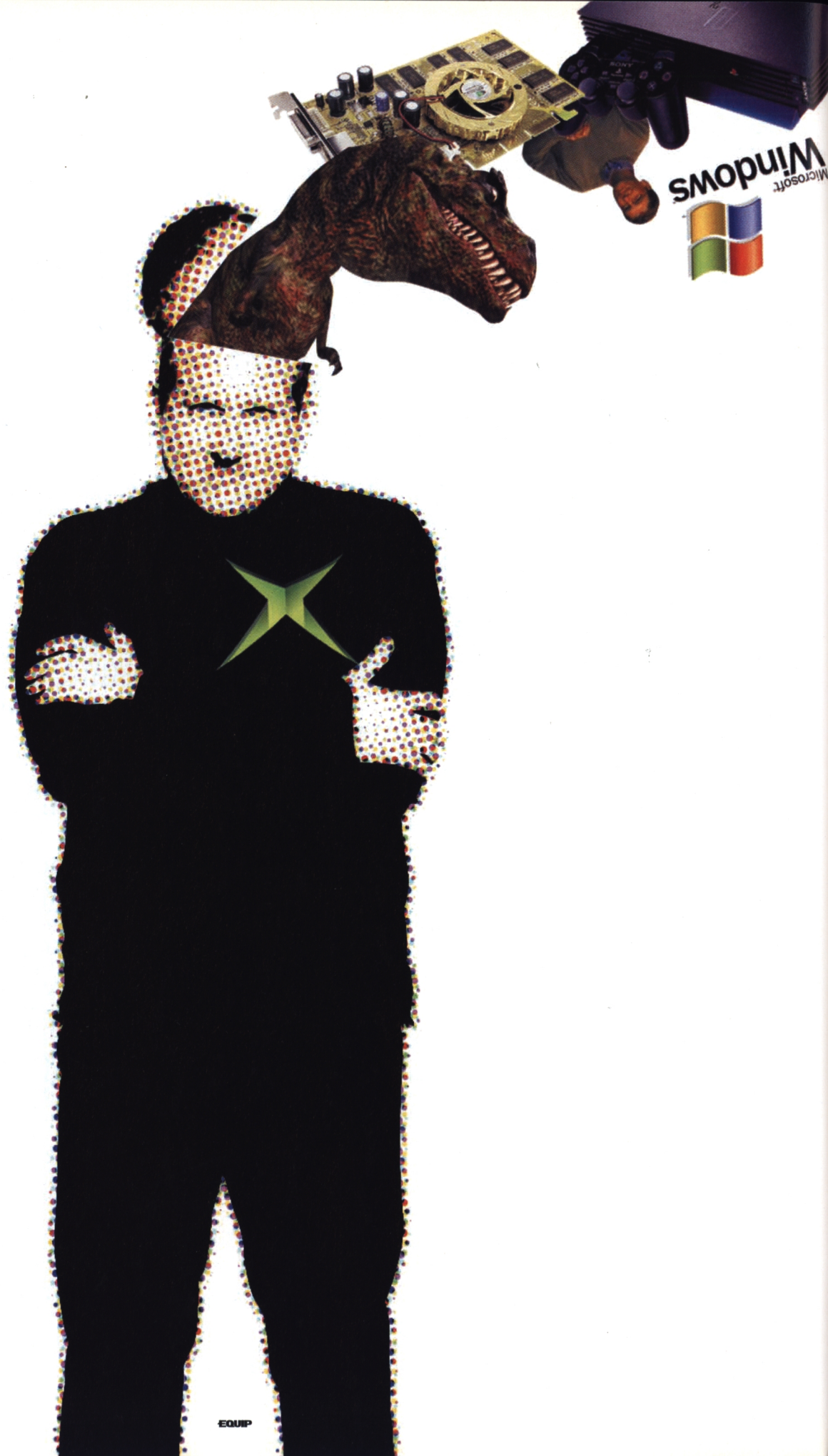


performance characteristics of the GPU is a real challenge, and getting the best out of the unified memory architecture will be critical."

Computer Artworks' Atkinson agrees. "We'll have to get down-and-dirty with the more advanced hardware features like push-buffers and partial shader uploads," he says.

"There is always room for learning new tricks, and improved profiling tools will make a difference," concludes Climax's Hargreaves. "But I think the future improvements in Xbox titles will tend to be incremental rather than revolutionary."





Interview: Seamus Blackley

From coding the brilliant *Flight Unlimited* to the terrible *Trespasser*, Seamus Blackley has been around. But he will probably be best remembered as the man who came up with the idea of a Microsoft console. **Equip** finds out more

Though the likes of J Allard and even Bill Gates himself have publicly flown the flag for Xbox, the console would not exist without **Seamus Blackley**. Or at least not in the form it does today. It was Blackley who wrote a memo to Microsoft's big cheeses suggesting that the company should get into the console business using proven PC components.

Following the machine's successful launch Blackley left Microsoft to set up Capital Entertainment Group, a company 'founded on a desire to create truly groundbreaking games, the sort of original but risky projects that otherwise would never get made'. CEG's first titles will be published through Sega. But that's all somewhere down the line. **Equip** wanted to know more about his role in Xbox's existence...

You joined Microsoft after working on *Trespasser* at Dreamworks. What was your mood like at that time with regard to the videogame industry?

I wanted to move to Panama, change my name, and have my face surgically altered. I was an emotional disaster, and I was sure that I'd never work in the industry again, because I felt that I had let so many people down.

Basically, right up until we started slipping our schedule on *Trespasser*, I had felt an incredible drive to push the boundaries of what was possible in games, both from a technological and a creative standpoint. Prior to DreamWorks, I had been insanely lucky to have worked at Looking Glass with some of the most talented and innovative people in the industry at the time – and to have contributed in many roles to some really wonderful games.

That experience had given me a lot of confidence, which I foolishly leveraged into a

because they were comparing the performance of PS2, which at that time was still more than a year away, to the performance of the shipping PCs of the day, and of course it blew them away on a number of fronts.

But if you compared it to the parts (chips) that the ATIs and Nvidias of the world would be shipping in the PS2 launch frame, PS2 got smoked not only on a performance level but also from a 'useability' standpoint – the tools and basic principles that PC graphics were following were much better suited to

“When you realised that Microsoft was probably the only company on the planet with the resources to pull it off, you’d realise that your mission in life would be to make it happen”

position on *Trespasser* where we were pushing the technology and design on just about everything, and I had decided I could be both producer and responsible for coding the core physics at the same time. Naturally it all went to hell.

So, my feeling was that I had let down not only the fans (Internet fan sites were just brand new back then), but fundamentally that I had failed to push the boundaries on technology and design and had even receded them a bit. Worst of all, I had actually harmed the cause that I loved most and had been pushing as hard as I could (through games like *System Shock* and *Flight Unlimited*) – game physics.

I was confused, scared, and knew that I had a lot to learn. I lost my burn to innovate. My plan was to hide out at Microsoft.

What was in that original Xbox-proposal memo you wrote?

It grew out of a report that I was writing on the performance of the much-hyped PlayStation2, which if you remember was being called ‘the death of the PC’ and such by certain publications... I found it funny

doing film-quality content (largely because they were directly evolved – or rather hijacked – from the SGI and Renderman systems that people were using to make movies).

The problem was, of course, that it doesn’t matter what the newest, highest-performance hardware is in the PC world – games have to scale to support a wide range of machines. This effectively gives the win to the dedicated console, which sucked. So it didn’t take a genius to realise that the only way to show what the technology really could do would be to make a dedicated device that would all have the highest-performance PC silicon: a Microsoft game console.

When you then realised that Microsoft was probably the only company on the planet with the resources to actually pull it off, and combined that with the talk around the Redmond campus about executives wanting to make a ‘consumer device’, your brain would snap and you’d realise that your mission in life would be to get them to do it.

What were your feelings when you originally wrote and sent the memo?

Did you think it was a pie-in-the-sky scheme or were you confident?

Honestly, once we started showing people at Microsoft that a console was not only possible, but was a very exciting opportunity for the company, we began to realise that the job was not so much to push it through to completion, but rather that we had a major responsibility to ensure that it got done right. So I guess I never allowed myself to believe that it wouldn’t happen, and because of this I felt a huge to ensure that it didn’t suck – both for gamers and for the industry.

What was the first big obstacle you encountered?

The biggest obstacle was not what you’d expect; it was educating Microsoft guys that games are an entertainment business, not a technology business, and doing so without making everyone hate us. You can’t just adapt what you do for, say, Excel, to a console, but at the same time you have to bring all the stuff that Microsoft is good at to bear on the problem. Anyone familiar with corporate politics will recognise this as a pretty damn hard challenge.

Down the line, what other hurdles did you face?

Convincing people in the industry that it was real. It seems obvious now, but think about it...

“Hi, we’re from Microsoft, me and Kevin here, and we’re doing a game console, honest. No, really. And it will be more powerful than PS2. Stop laughing. And it will have a hard drive. And it won’t blue screen. And it won’t get fragmented. And, oh yeah, it will have an awesome online service, with no viruses...”

Did you ever come close to quitting?

Quitting or getting fired? There was that time J [Allard] and I threw the party for the games division with the stripper nurses and the green Jell-O shots...

To be totally honest, the times I think we all felt most discouraged were also the times that we knew it was most important that we stuck it out – for example when the vision for the project looked to be straying away from ‘kick-ass console’ to scary things like ‘home media server’.

Early on, Otto, Ted, Kevin, Nat and I really leaned on one another to keep it all together. It was very, very tough at times. But it was also amazing, and entertainingly bizarre.

What was the mood like among the Xbox team when you were trying to get it off the ground?

I remember going GDC in 2000, when Xbox was still literally five people, and having it really register for the first time that if we pulled it off it would affect a whole lot of people. So we were obviously very excited at the idea of making this fabulous console, but again I think it was also becoming apparent that we had a big responsibility to all these people, all our friends and peers and potential partners.

But you did sort of feel like a secret agent, walking around with a giant secret.

How do you think the team was perceived by the rest of the Microsoft ‘establishment’?

It evolved on a weekly or semi-weekly basis: lunatic skateboard criminals, crazy game people, ‘old-school’ Microsoft entrepreneurs, “the future of Microsoft,” “who are these guys – call security,” etc.

At what point did you realise that your idea was going to involve possibly billions of dollars of outlay, and how did that affect you?

I remember a meeting with Bill Gates and Steve Ballmer, in a tiny conference room in Redmond. We outlined our pathetic, early,





"Bill Gates has a really good sense of humour that astonishes people. And some advice: don't ever try to bullshit him. But make sure you're around to watch when someone else does!"

naïve business model, and Ballmer started yelling, "You're going to lose a lot of money!" about an inch from my head. We got smart fast, and busted our asses to be sure of all our numbers, and sure enough after that he always supported the project.

The reason it was possible to deal with it was because there were people there who we could get help from who knew how to do business and take risk on that scale. So our problem became one that we could mostly handle – designing and shipping the best console possible.

Of the team, you were apparently the one who dealt most with developers; what was their initial reaction to what

you were planning? And how did their attitudes change over time?

It was all about keeping your promises. That simple. At first, it seemed ludicrous, even to us at times, that Microsoft was serious about the console business. But every day you'd bust your ass to accomplish what you said you would, to deliver the tools and hardware and support and contracts, etc, and eventually people would start taking you seriously. It was a monumental effort on behalf of a lot of people on the Xbox team.

How was your working relationship with Bill Gates?

Bill was one of our biggest supporters early on. A lot of people talk a lot of shit about Bill, but you'd be hard pressed to find a more straightforward, honest, powerful guy. He's a geek's geek, with huge business acumen, and a really genuine love of technology. And he's got a really good, sarcastic sense of humour that astonishes

people; sometimes people don't laugh even at a pretty funny joke because they're so blown away that it came from Bill.

A word of advice: don't ever, ever, ever try to bullshit Bill Gates. But definitely make sure you're around to watch when someone does!

Did you work and play together? It's easy to imagine that you simply toiled in an office for 18 hours straight each day, slept, then started the cycle again...

Eighteen hours? That's crazy. That's for pussies. We had cots installed, and a contest to see who could go the longest without leaving the building. We eventually had to give it up when the board of health showed

up in biohazard suits, kicked us out, and threatened to burn down the buildings.

Someday, buy me a beer and ask me about Kevin, Chanel, J, Okamoto-san (ex of Capcom) and a piece of very moist birthday cake.

Working on such a high-pressure project, presumably there must've been some disagreements...

You know, I'm sure it sounds cute but when you have such a hard job, and you have such a sub-culture within a giant organisation, and you're working on something so exciting, you really don't get a lot of serious interpersonal bullshit. However, I think that Allard is probably still pissed off about the \$100 I won off of him by beating him at *Robotron* in front of a rolling BBC camera...

Does J Allard really skateboard around Microsoft, or was that just for the cameras?

Absolutely, he's the real deal; he was in 'Transworld' magazine when he was a kid. Several of us were genuine skateboarders, but the press kept on trying to call us on it by asking us to do tricks, assuming that the decks in our offices were for show. I think it's safe to say that if there were a competition for ollie-ing in dress shoes J and I would rank pretty well.

How concerned were you about Microsoft's 'corporate behemoth' image when you were trying to make Xbox work, and how did that manifest itself in what you felt you needed to do?

We were hugely concerned with it, which is one of the reasons that Kevin and I spent so much time early on visiting developers and publishers all over the world.

I still think it's funny when people talk about Xbox as if it's some extension of Microsoft's evil plan to dominate the universe – because it was basically an idea that a small group of very non-corporate people shared that caught on and took hold in a giant company. It was genuinely built out of a love of games, and was a genuinely organic phenomenon.

When did you first take the concept to Japan, and what happened in terms of drumming up support?

Looking back, and remembering the looks on some of the faces of people who are now good friends of mine, I'd say that at first blush most Japanese industry people thought it was genuinely hilarious that Microsoft would attempt such a thing. But at the same time, it was so crazy that it was also kind of scary. And I think that phenomenon was unintentionally the thing that got our foot in the door with Japanese developers.

Incidentally, it's pretty interesting to note that although Xbox is seriously hurting with consumers in Japan, it continues to have good support from developers there, and I think that's the result of a very honest, if slightly puppy-like, attempt on our part to

make sure that Japanese developers felt welcome on the platform. Having been on the other side of the equation when working on the Japanese consoles – getting badly translated, incorrect console documentation months after the guys in Japan – we were adamant that Xbox would not return the favour.

Which of your experiences in Japan stood out?

Kevin and I found ourselves at the Tokyo Game Show, in spring 2001, standing in the Xbox booth, when Itagaki-san was starting his presentation of a very early DOA3. There we were in Japan, with Xbox banners all over the place, looking at a Japanese fighting game playing on Xbox hardware. It was too much; I thought, 'Don't they realise it's all just a dumb idea we had?' I think we both cried a bit; it all became terrifyingly real at that moment.

J Allard once said that Microsoft demonstrated the big chrome 'X' prototype to investors and they wanted the final machine to look just the same. What was your reaction to that?

Everyone wanted the chrome 'X' to be the final design at some point; everyone except me and the other guys who built them and had to keep them running! They were very impressive, sexy looking, shiny, etc – but they had crazy prototype hardware that would overheat if you so much as looked at them wrong or thought the wrong thought, they weighed about 3,000 pounds, they were fragile as hell, and you had to polish them until your fingers bled to get them to look right. In short, it was a miracle that they worked at all.

But they did the trick. We built a lot of demo units for internal meetings largely with no budget, but the silver 'X' was the first one we got real approved money for, and the first one we would take outside Microsoft. We needed something to show the public that was clearly not the final design (people assumed it would be smaller – ha!) but

was also super sexy – like a show car, as Kevin put it.

So we were sitting around the design department thinking of things to do when Horace drew an 'X' on the whiteboard and said, "I can make that from billet aluminum," or something like that. And I said, "I could fit the hardware into that," and a whole year of hell was born!

What was your standard line when someone would make the "It's a bit big, isn't it?" observation?

When **Edge** asked me, I think I made an obscene reference to the weight problems of the British royal family.

What mistakes do you think Microsoft made with Xbox?

Quite frankly, when I look at where Xbox is today, given that the project really only got started (funded for real) literally in early 2000, how can I say anything? There are countless things in hindsight that you could change, but look at some of the articles from 2000 and 2001, in which people talk about how Xbox was going to suck and fail, and you have to admit that many more things went right than went seriously wrong.

For me, the number one thing I'd like to have seen done differently would be a genuinely serious focus on making sure Japanese consumers would love the box, even if it meant radical changes. That, I think, is the one big ball that was dropped.

What was the most valuable thing you learned during your time on the Xbox project at Microsoft?

Never, ever give up. It's that simple.

Strictly in terms of Xbox, what do you think your legacy will be?

I'd like to think that it's something like 'The guy who made sure that Xbox was good for the game industry', but it's more likely 'That guy who promised a lot of things, some of which actually came true!'

The naming game

How Microsoft's console almost became CyberPlayGround...

Asked about other potential names for Xbox, Blackley tells all: "First, there were our code names, which were WEP ('Windows Entertainment Project' – designed to make Microsoft executives comfortable) Midway ('Midway between a PC and a console', or 'Battle of Midway' – you decide) and DirectX Box (which was shortened to xbox in email very early on, in the Otto-Ted-Kevin-Seamus-Nat days).

"When we got the first approval, Kevin was told we had to get a new name, because 'xbox' wasn't legally sound, so against his judgment he did so, and got the phase two, or 'car' names. These were so bad we didn't even save them, but I remember making fun of one of them by calling it the 'Microsoft Bunduss'.

"Then we got the 'acronym' phase from the naming geniuses. Here are a few samples of that crap:

MAX Microsoft Action Experience	MOX Microsoft Optimal Experience	MEA Microsoft Entertainment Activator
AIO All In One	E2 Extreme Experience	AMP Active Microsoft Player
MIND Microsoft Interactive Network Device	MTG Microsoft Total Gaming	VPS Virtual Play System
FACE Full Action Center	VIP Virtual Interactive Player	MAP Microsoft Action Play
MITH Microsoft Interactive Theatre	PTP or P2P Powered To Play	MEGA Microsoft Entertainment & Gaming Attendant or Microsoft Entertainment & Gaming Assembly
XON Experience Optimised Network	VIC Virtual Interactive Center (disks/games could be called VICs)	CPG CyberPlayGround
MVPC Microsoft Virtual Play Center	MARZ Microsoft Active Reality Zone	VERV Virtual Entertainment & Reality Venture
TAC Total Action Center (disks/games could be called TACs)	TSO Three, Six, Zero	OM Odyssey of the Mind
MARC Microsoft Action Reality Center	EHQ Entertainment Headquarters	P2 PowerPlay
LEX Live Entertainment Experience	O2 Optimal Ozone or Optical Odyssey	IS1 Interactive System In One
M-PAC Microsoft Play and Action Center	MIC Microsoft Interactive Center	MET Microsoft Entertainment Technology (or Microsoft Entertainment Theatre)
RPM Real Performance Machine	R&R Reality and Revolution	

"Phase four was a battle between us and the naming guys, when we decided we just wanted to risk it and go with xbox (since that's what everyone called it anyway!) and they wanted, for some unknowable reason, to call it '11-X' or 'Eleven-X'.

"Finally, we told them no, but still had to decide: X-Box, xBox, XboX, Xbox, X-box, etc..."



Keep your friends close

Four Xboxes, four television sets, and 16 friends. It's the Internet in your house. **Equip** looks at Xbox Live's lesser-known brother, system link

Halo was a landmark in multiplayer gaming history, but it wasn't the beginning. *GoldenEye* gave us fourplayer splitscreen Bond-powered murder and, in so doing, enchanted millions of gamers across the world in a cocktail of ecstasy and agony, alternatively hunched in grim concentration and punching the air with joy. That wasn't the beginning, either. *Quake* had already allowed those with sufficiently powerful hardware, broad enough Internet connections and the requisite technical savvy access to violence on a massive human scale. And before that there was the office-wide *Doom* deathmatch. Perhaps that was the beginning.

So, Xbox is just a PC in a pretty box, right? Well, a PC in a box, anyway. And Microsoft left that office standard – the Ethernet card – in place, so suddenly what had previously been the preserve of journalists, bored IT engineers, developers or the obscenely dedicated was unleashed on the public at large.

It wasn't the first time that consoles had been given a link-up facility, of course (*Wipeout* and *Destruction Derby* had given PlayStation owners a taste of multiplayer racing action a generation earlier, a tradition continued into the current Sony generation), but with Xbox's release and its accompanying launch spectacular *Halo* it was finally possible to recreate both the intimate thrills found in the splitscreen ruckus of earlier console favourites and the detached insulation of Internet play within the same game.

The inclusion of system link in the Xbox hardware perfectly fits the genre of the mighty firstperson shooter, with its slow pace and tactical depth rewarding the kind of deep co-operative play engendered by the team-based splitscreen and system-linked warfare. This was a revolution in console hardware and software side by side and, while not easily accessible for many, for those fortunate enough to be able to experience it there was a change to their perception of what console gaming could be.



Watching the opposition

The biggest problem inherent to splitscreen gaming is the ease with which skilled players can 'screen watch' – the practice of monitoring your opponents' portions of the screen in order to judge their positions and hunt them down for the kill. Counter to that is the camaraderie of having those opponents sat only a sofa away and being able to share those moments of skill, luck, victory and defeat with immediacy and intimacy.

In contrast, the traditional view of online gaming provides little of this sort of team spirit – where is the joy in shooting random and anonymous strangers? Clans and 'Friends' lists may go some way towards making the online experience a more personalised one, but these are still soulless compromises compared to the exhilaration of physically pointing at your defeated enemy and laughing.

With a couple of teams around a couple of TVs in a couple of rooms, disadvantages turn to advantages, with players able to use splitscreen to quickly see where teammates are positioned while the remoteness of their enemies leaves

them guessing as to their tactics. The fact that those enemies are sitting next door or perhaps downstairs means that when the jubilant victory is achieved, rather than mute silence or an empty text box, the winning team can rush through whooping and hollering and see the looks on the faces of the defeated as they confront their conquerors. Primal stuff.

Sixteen Xboxes

It is of course possible to link more than four Xboxes together. *Moto GP* allowed for 16 machines to be linked up, simulating the Live experience in the flesh. Obviously, the practicalities of getting 16 TVs, Xboxes and willing riders together at the same time makes this an experience available to almost none outside of the actual developer's office, and ideally serves to illustrate the major obstacle in the path to widespread use of system-link functionality. Even gathering four of everything and 16 players at one time is a major undertaking and beyond the ken of all but the most dedicated gamer.

More recent titles that work well in link-up, such as *Midtown Madness 3*, have for the most part been designed with Live very much in mind, and are usually set up to work best in that environment. The simple fact is that, for the most part, system link is the sole preserve of *Halo*, with other titles played when the equipment makes it possible – more from a sense of interest than of desire.



The most extreme Xbox multiplayer link-up option is offered by THQ's *Moto GP* (left), which allows no less than 16 consoles to be daisy-chained. Link-up in *Midtown Madness 3* (right) is rather less extreme



Halo (above) with 16 players via four Xboxes and the same amount of TVs is a hard-to-beat gaming experience, the key, clearly, lying in the close-human-proximity aspect. Of course, few get the chance to try it





Project Gotham Racing 2 (right) features both versus competition and worldwide leaderboards via Xbox Live. Score tables have proved a surprisingly popular element of the Microsoft online console experience



Emotions taking over

The effect of the availability of system-link play on Xbox sales is immeasurable, but almost certain to be incredibly small. In contrast, an understanding of the emotions, pleasures and pains of this mode of play has the potential to have a huge significance to the future development of the Live experience, and, looking even further ahead, the future of communal videogaming as a whole.

Creating a sense of community around a game has traditionally required the sort of dedication the mass market is simply unwilling or unable to offer. The amount of time required to become submerged in either an MMORPG or FPS is astronomical – far beyond the few hours a week most can muster. In comparison, many simple splitscreen or turn-based games can provide far more community than faceless internet savants. More golf next Sunday?

The provision of splitscreen and Live play is one that seems to address a great number of the issues brought up by Internet play: bringing you closer to your friends, if not your enemies. Certain Live titles, including *Moto GP2* and *Project Gotham Racing 2*, log into Live even when you're seeking to race offline, giving players constantly updated world leaderboards as well as weekly and monthly challenges. And these are undoubtedly valuable attempts to engender that all-important sense of community... but still some way short of beating the person sitting next to you on the sofa.

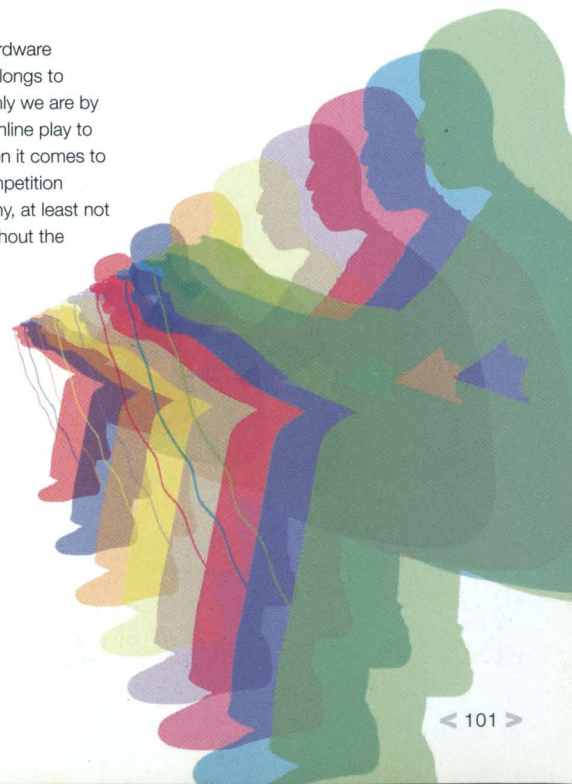
The legacy of link-up

We are constantly told by hardware companies that the future belongs to Internet gaming – and certainly we are by Microsoft, which perceives online play to be its particular strength when it comes to what it can offer that the competition cannot (or, in the case of Sony, at least not as comprehensively). But without the

proper attention to the appeal of today's social gaming it could still become a white elephant.

With even Microsoft quoting only 75,000 Live subscribers across the whole of Europe to date it is clear that online console gaming still has a long way to go before it proves itself to have genuine relevance to the future of gaming. System link is an old technology and requires more coordination and hard work than many will ever be able to muster, but it does provide unique insights into why we play together and how that sensation can feel when it really works.

Those making titles for the future of Internet play could do worse than look to the joys of these social interactions and think long and hard about why we take part in these games at all.



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The making of...

Halo

It was the first non-Japanese videogame to secure a revolutionary ten in **Edge**, and is one of the greatest titles of modern times. Here, Bungie sheds light on its masterwork of binary finery

The main problem with the flamethrower was that we could never get the effects to match the art quality of the rest of the game," says **Jaime Griesemer**, former mission designer on *Halo* and now design lead on *Halo 2*. "They stood out as something substandard. Plus, when you have a flamethrower, you want to burn things, and you want to set fire to the ground, and you want that to then spread to things nearby. We didn't want to do a flamethrower that wasn't a proper flamethrower. So we took it out."

Brilliant. No, really. For anyone out there taking notes, anyone out there hoping to craft a game that fits into that ever-expanding genre of vapourware that is the 'Halo beater', Bungie has just revealed one of its deepest secrets: common sense. "And so any time we ran into a situation where something was working surprisingly well, we doubled the amount of effort and attention we were giving to it," adds Griesemer. It's almost as if they were consciously trying to make the best videogame that they could. And they did.

Halo is arguably the most distinguished videogame of its generation, and one of the best ever. Arguably, of course, being the operative word there. It's not vanity talking, but you only have to gauge the spasmodic reactions to it being a recipient of **Edge's** revolutionary ten-out-of-ten score to see, at the very least, just how unexpected a debut it was; immaculate conception to some, bastard lovechild of cliché to others. It made no sense. Everyone had watched the footage, meditated on the details and lingered on the screenshots, but the media mathematics just didn't add up to such a stunning end product.

Not to mention the kinked development arc of the game, filled with format-dodging chicanes and a mighty hairpin in the form of the merger with

Microsoft. It's summed up as cogently as need be by producer **Hamilton Chu**: "Work began on *Halo* three years before release, and it started as a really small team of engineers working on technology that was supposed to be used in an RTS. But at some point, they decided they wanted to go back to the roots of a game like *Marathon*, combining it with some of the things we learnt from *Myth*."

"The acquisition by Microsoft allowed us to move from PC to console, which was an opportunity to refocus. It was something that we were interested in for a long time, and had a profound effect on the game. It allowed us to make it graphically rich, and make it play very well. *Halo* started off small, but now it encompasses all of Bungie."

Griesemer elaborates: "Bringing *Halo* to Xbox was one of the stipulations of the merger with Microsoft. A lot of our decision of whether to go to them was based on the fact that we wanted to work on an Xbox game. Working on a console is different from developing on the PC, because you have to have the apparatus to move builds on to the console, and you have to work with specially made debug kits, so, physically, it changed our process. It also changed a lot of what we spent our concentration on. When you're making a PC FPS it's very obvious where your control method will be, and you don't have to think about it. We had to put a lot of thought into the control that we weren't expecting."

That's the first thing of many, and it once again falls under the umbrella of common sense. *Halo* felt like a game that was built from the ground up around the controls, as opposed to importing the typical genre schemata, and it feels like it's down to the excellently judged spring of the analogue. "We knew that in order to be successful, the game had to play really well on a game pad. So that was one of the first things we tackled, and it was one of the things we tested with the public during playtest the most," says Griesemer. "In a lot of ways, the switch to Xbox was a big bonus, though, because we knew exactly what platform our audience would have, and we could use

Original format: **Xbox**

Publisher: **Microsoft**

Developer: **Bungie**

Origin: **US**

Original release date: **2000**

every scrap of power of that platform and not have to worry about leaving people behind. Bungie started out as a Mac company, and the Mac community was a great one to develop for because it was very tightly knit, it was pretty fanatical, and there were not a lot of people developing for it, so it was possible to reach a lot of people. The Xbox is a lot closer to that feel than the PC is, with a lot of competition and a divergent market."

Has the success of the game changed Bungie much? "It's much easier to find talented people, because they've heard of us. In our day-to-day practice, though, it hasn't really changed us that much at all. I always believed that *Halo* was going to be great, but I did not expect it to be as big a success as it was. Every time I hear it mentioned in 'Entertainment Weekly', or that Julia Roberts likes it, it's just not what I expected. There wasn't a single point where I was suddenly surprised by the game being what it was, but there were definitely points where certain aspects of the game suddenly leapt forward and presented themselves as really fun. When we first got the Marine dialogue in, for example,

even in a rudimentary form – where guys would say the same lines over and over and they weren't very good – you still cared for them a lot more than you did in other games."

Halo is ripe with savvy game decisions that, ironic as always, bucked expectations before raising the very same bar that cast the aspersions; a juddering swerve that, after the dust had cleared, put people's ideas more on track than ever. The recharging energy shield, inability to carry any more than two weapons (excluding grenades), the functional brutality of the melee swipe – all hallmarks that are swift becoming some kind of industry standard, a fast track borrowing to prevent your FPS from feeling out of date. Was *Halo* designed to give the genre a fillip? "I think yes, but that wasn't really how we approached it, explains Griesemer. "It wasn't that we wanted to do something different. We just had some very specific goals we wanted to accomplish above and beyond just making a game from the firstperson perspective. And those goals led us to create new solutions that weren't necessary in other FPS games. For instance, once we had the recharging energy shield in

place, it was really clear that our encounters were going to be set up in such a way that you would be able to play like you were extremely tough, but at the same time you would be vulnerable if you got over-extended. That meant that people were dying a lot."

Which is where the monumental badass ideal comes into play. What good is it taking on the role of a hero if you can't indulge in heroics? Why be a thankless patsy, veered like a puppet by fate, who has to run errands for village people in order to collect enough glowing orbs to gain you access to the next area filled with menial, manual labour? Not many people want that in a videogame, but that's often what you get. Where's the empowerment that comes with picking up the joypad? Maybe that's the secret of *Halo* – you never feel like you're fighting a game design.

"I think you die in *Halo* more than you do in



most FPSs," says Griesemer, "which meant we had to come up with a save system that would not encourage people to kill one guy,

I then save, and kill another and then save like you did in PC FPSs. But at the same time it had to not punish you for dying, so that you felt like you were able to go ahead and take risks and fight in an exciting way. That led us to the checkpoint system, which worked really well, and is one of the reasons why you can sit down to play *Halo* and then look up four hours later and not realise the time has gone by."

But what about the save and quit option? A worrying number of people who've played *Halo* have learned the hard way that the checkpoints are just 'soft' saves, and that in order to ossify your progress when you switch the machine off, you have to 'save and quit' out of the game. Was this just an oversight, or intentional? "It was forced on us by the way the Xbox works," Griesemer explains. "It has a utility partition that you can save things to really fast, and so we had to use that for the checkpoint saves because it was fast, but to move things into more permanent memory takes more time than the single blink of

an eye that we wanted the checkpoints to happen in, so it was just an unavoidable limitation of the hardware."

But back to those design decisions. "My favourite aspect of the game is probably the health and shield system," Griesemer reveals. "That had the largest effect in making the game fun. Definitely much improved over the whittle-away health systems in previous FPS games. A lot of people underestimate just how important it was. *Halo* without a regenerating shield isn't *Halo*, and it's not much fun."

Legendary arguments

Self-evident though these decisions may be, such non-traditional sensibilities are often met with internal resistance. Is Bungie any different? Says Griesemer: "Bungie appeals to a lot of independent and strong-willed people, so there were a lot of times when we disagreed on how things should be done, and we would battle it out until we could come to a compromise that would make everyone happy. When we shipped, we worked all the big issues out, and the only things left were small ones.

"One of the things we talked about a lot was whether or not the Elites should have energy shields that recharge. And in the end, we made them recharge, and I think that made

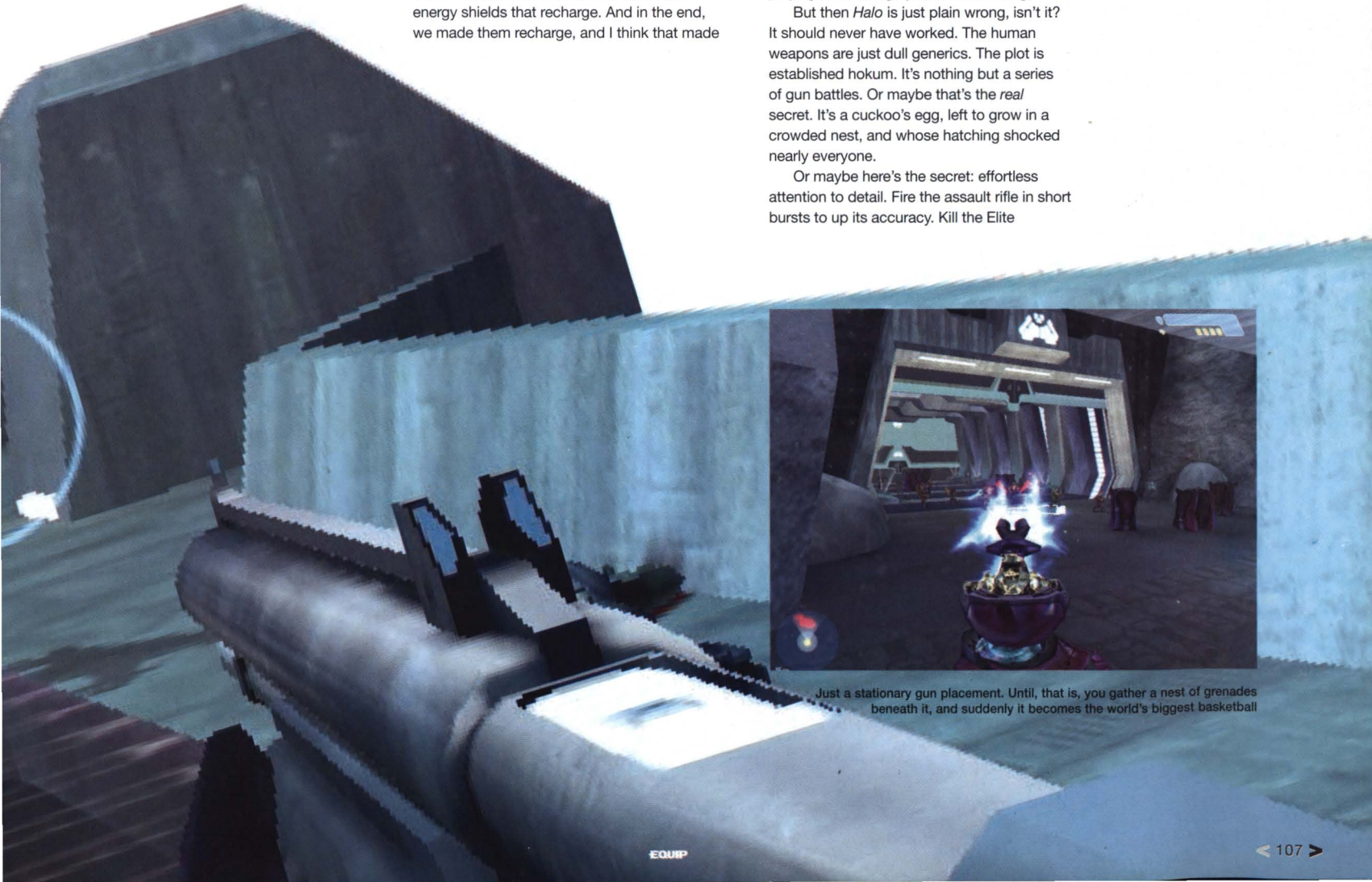
them a lot more tactical, because as soon as their shield goes down, you have to pursue them even when they take cover, and kill them while you have a chance. If you were just able to wear them down, I don't think they would have required a fraction of the effort."

If that hadn't happened, the brilliantly infuriating *Legendary* setting would have been nowhere near as reputed as its name suggests. "Absolutely," agrees Griesemer. "That was another issue – making *Legendary* as hard as we could make it, without actually cheating. Every time one of the testers came back and said that they managed to beat a *Legendary* level, the mission designers would always make their levels harder so that they couldn't win for a while.

"As a sidenote, I did the tutorial, the opening level. The original tutorial was very, very bad. People would get killed while they were trying to learn. I actually had several play testers decide they wanted to quit playing the game and go home, rather than go through the opening level. So, for something that started out so completely heinous, we got it into shape where it's a really effective tutorial and also engaging so that you continue playing even though you're still learning."

But then *Halo* is just plain wrong, isn't it? It should never have worked. The human weapons are just dull generics. The plot is established hokum. It's nothing but a series of gun battles. Or maybe that's the *real* secret. It's a cuckoo's egg, left to grow in a crowded nest, and whose hatching shocked nearly everyone.

Or maybe here's the secret: effortless attention to detail. Fire the assault rifle in short bursts to up its accuracy. Kill the Elite



Just a stationary gun placement. Until, that is, you gather a nest of grenades beneath it, and suddenly it becomes the world's biggest basketball

commander and the remaining Grunts will scatter in blind panic. Fire the minigun mounted to the back of the Warthog jeep and watch as the ejected bullet casings roll down the hill. This was never in the press release. It's a synergy of subtleties that conspire to turn the game into something that should, in theory, be plain as polygons, but elevated it into something startling and marvellous. Maybe.

The human weapons are nothing but a genre, but they're a microcosm of the game itself, implemented with such attention and majesty as to elevate the experience far and away beyond what you expect. It's the execution that brings it all to life.

Marty O' Donnell, music and sound designer, elaborates on the luxurious suite of noise that helped infuse the game world with such atmosphere: "Every piece of shrapnel has its own sound when it hits, and you know where because of the surround

environment lead – adds: "One of the challenges the environment modellers faced was designing specific architectures specific to the human race, as well as the alien race and Halo itself. It's pretty effective, though; whenever you enter a room, you know which race built it."

Animal behaviour

Speaking of races, it's the intermingling of aliens into one religious troupe that allows the Covenant to feel like such an interesting, multifaceted foe. "Each enemy moves a little like an animal," explains Abeyta. Jackals are very much like birds, very guarded behind their big shields. Grunts are comical little aliens that seem to have trouble moving under their own weight and sport a shark-like fin on their backs. Elites are beast-like – big cats who are agile, cool and scary."

"Top of my list of my favourite bad guys is the Spec Ops Elite, just because he's so

"Every plasma-round hit has its own unique burning noise depending on where it lands – which, by the way, is my own personal mouth noise"

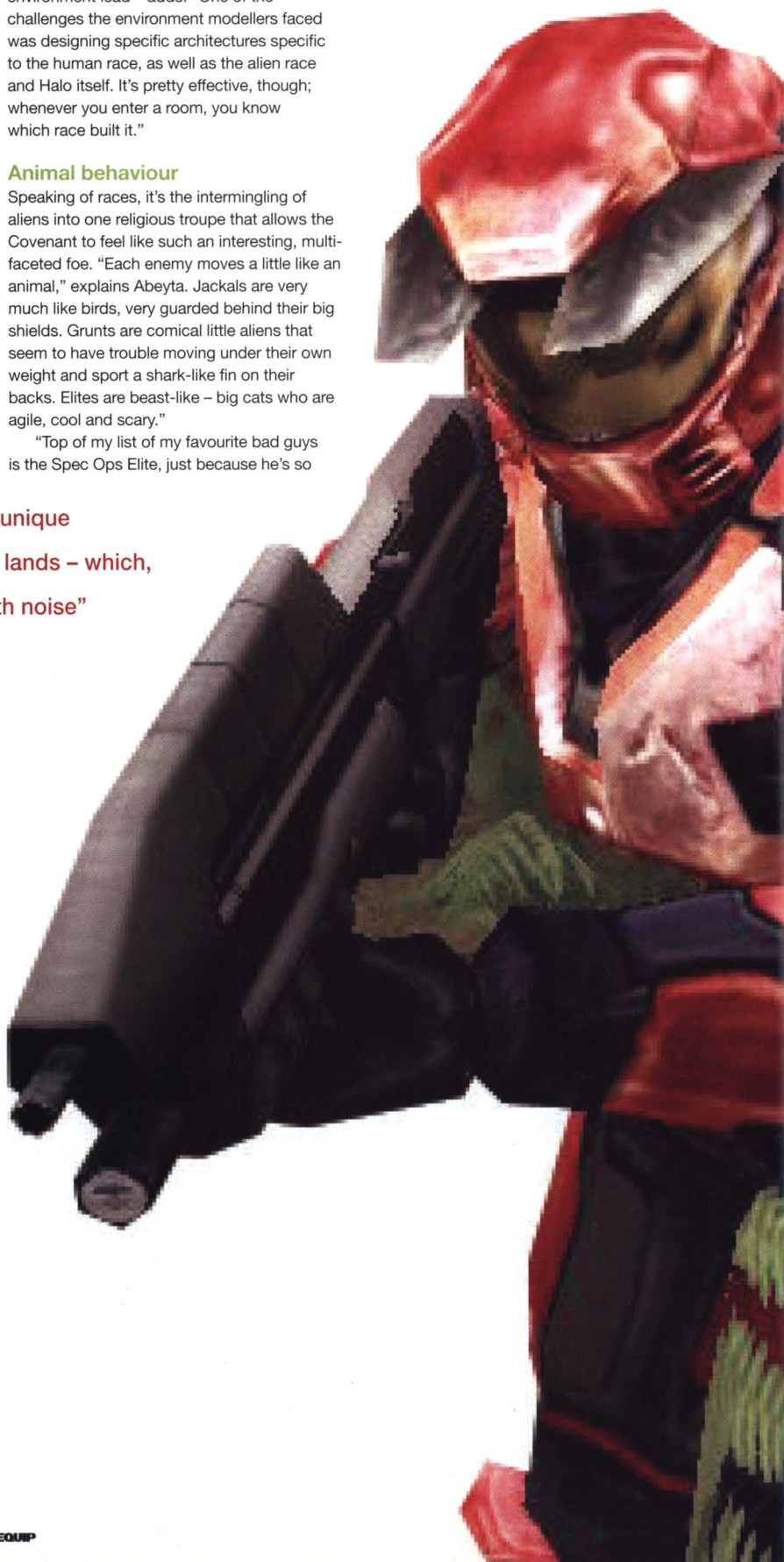
sound. The giant waterfall on Halo truly echoes off the cliffs. The Hunter's breathing is tied directly to its idle and active animations. Listen closely on *The Assault On The Control Room* and you can hear the ice creaking, and being hit by the snowflakes. Every plasma-round hit has its own unique burning noise depending on where it lands – which, by the way, is my own personal mouth noise. Mouth noises are excellent for sound effects in games. And that melee attack sound on the back of a Hunter – gabonk? Think watermelon wrapped in tin foil, and a baseball bat."

More sensible decisions, from **John Howard**, design leader on *Halo*: "We didn't want to make a typically scaled set of weapons, where each successive weapon is better than the others. Every situation has an ideal weapon."

Artist **Shikai Wang** explains the choice of 'typical' human weapons – pistol, shotgun, rifle, rocket launcher, sniper rifle – to be found in the game: "We wanted to make sure that the weapons that humans used were comfortable and recognisable, so the player would feel right at home and know what to do with them. Which allowed us to go crazy with the alien weapons instead."

Howard continues: "We did exterior as well as interior environments, which is why we have the dropships. Unless you populate the entire thing and have enemies running across terrain for minutes at a time, dropships are a way to get troops in there whenever we want to reinforce the battle for either side."

Steve Abeyta – animation and



The signature colour of the game is the deep, rich purple of a Covenant Ghost (centre), a hue that seems to infuse in every single part of *Halo*

challenging, and yet it seems like it's because he's outsmarting you, and not just because he has perfect aim or a million hit points," adds Griesemer.

The Elite is the Covenant equivalent of Master Chief, and one of the most punishing enemies a player can face. "He's every bit as

tough as you are. Fighting two or three at a time means that you have to be a lot smarter than they are. Although I think that a close second is the stealth-shielded Flood combat form. There's only one in the entire game – in the armoury in the final level – but I always forget he's there, and he scares me to death. You're so preoccupied getting a rocket launcher that you're not paying any attention and then he just jumps out. I also like him because he indicates that the Flood are intelligent, and know how to use equipment, and aren't just dumb alien monsters."

Which is a surprise. Playing *Halo* gives the impression that The Flood are dim automatons, shotgun fodder whose biggest strength is their movement in relentless straight lines and overwhelming numbers. "The Flood AI was originally intended to be every bit as complicated as the Covenant, but we ran out of time implementing behaviours and they ended up being a lot simpler and straight forward," Griesemer explains. "We definitely wanted it to be different. We never intended them to take cover or throw grenades, but we didn't get a chance to develop all of the characteristics of the Flood that was going to make them not only different and very interesting to fight."

Which puts Bungie in a sticky situation for *Halo 2*. Does it implement its intended

artificial-intelligence routines, or does it keep the Flood deliberately handicapped because that's what players have now become used to? All Griesemer will say is: "the AI in *Halo 2* is going to be much improved."

The designer's favourite

The estranged wit of The Flood is not the only eye-opening factoid that players could have read wrong, though. "I think my favourite level is Halo, the second level, because it has some of the most complicated encounters in it," says Griesemer, surprisingly. Surely it pales next to the multi-racial four-way ruckus during



Initially terrifying, a Hunter becomes a laughable playmate when you discover the smashing orangey bit in the small of its back





the latter levels? "There aren't very many encounters in the level, but the ones that are there play out in lots of different ways and you can try out many different tactics on them. It's mostly the second half of the level, where there are just three encounters – the rescue of the lifeboats – but they are really extended, and have a dramatic arc to them.

"I think that the actual environment of Halo is one of the more interesting – it's the signature environment, with the green hills, the 1,000ft cliffs, Halo stretching off into the sky and the Warthog driving all over the place."

One of *Halo's* strengths is that extended peak of spectacle during the first half of the game. Once you've fawned over Halo itself, you get the slight worry that maybe you've seen the best there is to offer. Levels are all too often an album for designers, starting off with some truly tempting goods in the early stages – the signature single that's had all the airplay – before lulling into more uninspired filler territory. But from *Halo's* second level, you took the fight to the Covenant in their own mothership. And then the equally panoramic Silent Cartographer – an entire island in one gaming mouthful. And *then* there's The Assault On The Control Room, where wonderful open-ended war plays out on a number of stultifying battlefields. An enduring crescendo, then, before the second half of the game which, while home to the biggest twists and plot motions, is the one that has courted the most ire.

Revisiting the Library

The Library. Most disliked, often despised, and home, ironically, to nothing but the gaming equivalent of an actual library. An overlong firefight with the Flood; was it intentional in order to get the player used to fighting this brand new threat, or a lack of time? Griesemer explains: "The library gets a bad rap. The fun part of the mission comes in the last 10% of the effort. Unfortunately, we were only able to put in 90% of the effort to make that mission fun and that last ten is really obviously missing. For instance, the actual environment is very interesting, in theory – there are these hallways that go around the big central space. You used to be able to look out into them, but then very late in development we realised that we weren't going to be able to pull a good frame rate in that area, and so we had to close off a lot of them, making it look very regular. You couldn't really tell what kind of structure you were in."

"There were also a number other little problems. The AI couldn't run on the elevators, so the encounters we planned completely went away as the Flood ended up just standing on elevators for a while. Guilty Spark, too, had tons of interesting things to say to you, but it turned out you can really never hear them. A lot of the little things like that added up to make the Library a lot less

than what we wanted it to be."

That's not where it ends, though. A lot of people seemed to have issues with the recycling of some of the levels, most notably Two Betrayals, which is just The Assault On The Control Room in reverse, albeit pepped up by the inclusion of countless set-pieces involving the Flood and Banshee vehicles. Was it a deliberate re-use of an existing environment to ram home the impact of the Flood on the world, or did Bungie just run out of time? "Well, I would say that time was a factor," Griesemer admits. "We knew that we had to make this game really quickly, and we decided that one of those ways would be to get as much re-use out of the geometry as possible. That said, we did want to reinforce the impact that releasing the Flood had caused, and so the original plan called for lots of Flood spores and Flood-encrusted objects, and lots of Covenant that were bunkered up and being besieged by these huge armies of Flood. We were able to do some of that, but weren't able to implement nearly as much of the environmental changes as we wanted. We wanted it to look drastically different."

There are a lot of stories about the last-minute nature of some of *Halo's* most impressive content. Such as the Banshee, the Covenant's bulbous but liberating fighter craft that allowed players to explore the heights of some levels, and trace out some beautiful and ghostly trails while approaching the fight from a brand new angle. They nearly didn't make it. "I took the section of each level that I was working on that had Banshees in them, and carefully commented my script so that I could turn them off at a moment's notice – a kill switch – because we weren't sure if they were going to get in or not," says Griesemer.

Some say that the multiplayer nearly didn't make it because Bungie was unhappy with it. True? "We decided pretty early on what kind of scope the multiplayer would fit into; I wouldn't say it was trimmed at the last second. We knew for months in advance exactly what we were going to do. You always have plans much more ambitious than what you're able to accomplish. A lot of those plans we still have, too"

Hopefully, these include adding many neat touches, references and sly winks that hardcore fans will slowly peel away as they reduce the game to digital rubble. The number on the bottom of Chief's boot, the tiny creatures that live in the ocean surrounding the Cartographer, the hippo on the spent shotgun rounds, the hidden tune, the hungry grunt. Was there *anything* that wasn't found? Nope. Bungie is a proud parent.

"I think our fans have completely run it dry," laughs Griesemer. "There's not a single thing I can think of that was not found. There might be some things that you can find with a copy of the script editor, that you can't find on the Xbox. With PC *Halo*

coming out, they're going to find those too.

"However, the Prophets were originally around in *Halo 1*, but we ended up taking that part of the story and moving it into the background. If you use your imagination, you can spot where they were and what they were doing during *Halo*, and we'll probably reveal more in *Halo 2*. The Engineers, too, were genuinely in there but they don't actually appear on the levels anywhere. They were still in the map file, though, and so people were able to use modded Xboxes to gain control of them. They had no role we were satisfied with, so that's exactly why they weren't included – we didn't have a role for them in combat, so we ended up taking them out and just concentrating on the characters that did."

The secret of Halo

So, who knows what the secret of its brilliance is? Certainly, *Halo* is only an FPS the same way that *Mario 64* is just a platform game. It contains some of your greatest gaming anecdotes, but you just don't know them until you've played it. It's a game where stealth is such a seamless, naturalistic part of the flow of play that people never get around to talking about it. They're too busy whooping, grinning, recounting and reliving. And locked in mortal combat with *Legendary*.

Griesemer offers his own take on why *Halo* works so well, and it centres on the idea of a perfect 30 seconds of gaming repeated over and over and over. "It's related to the concept I talked about earlier, where the real fun part comes in the last 10%, and the 90% is just preparing for that 10%," he says. "So you put a lot of effort into creating the

"Guilty Spark had tons of things to say, but you can never really hear them. A lot of little things like that added up to make the Library less interesting than we wanted it to be"

character models and animating them, and the effects for the weapons, and creating a system that allows you to do damage, etc. Then there comes the last 10% where you subtly tweak the rate of the fire of the assault rifle, or whatever, and that's really where you develop that 30-second cycle of fun. It relies on really tiny changes in how fast you can throw grenades, for instance, or how many you can carry, or how often Grunts drop them. Once you've tuned those values to the exact levels, then you have these 30 seconds of play that you can repeat over and over and over, and they're going to be fun no matter how many times you replay them. And usually at that point you have most of the missions finished already, and so all of the sudden the entire game become more fun." Here's to the first 30 seconds of *Halo 2*, then.



The shotgun (top) not only ejects spent ammo casings, but each one is inscribed with an image of a hippo that can only be seen with a fully-zoomed sniper rifle. A strange God to put in the details

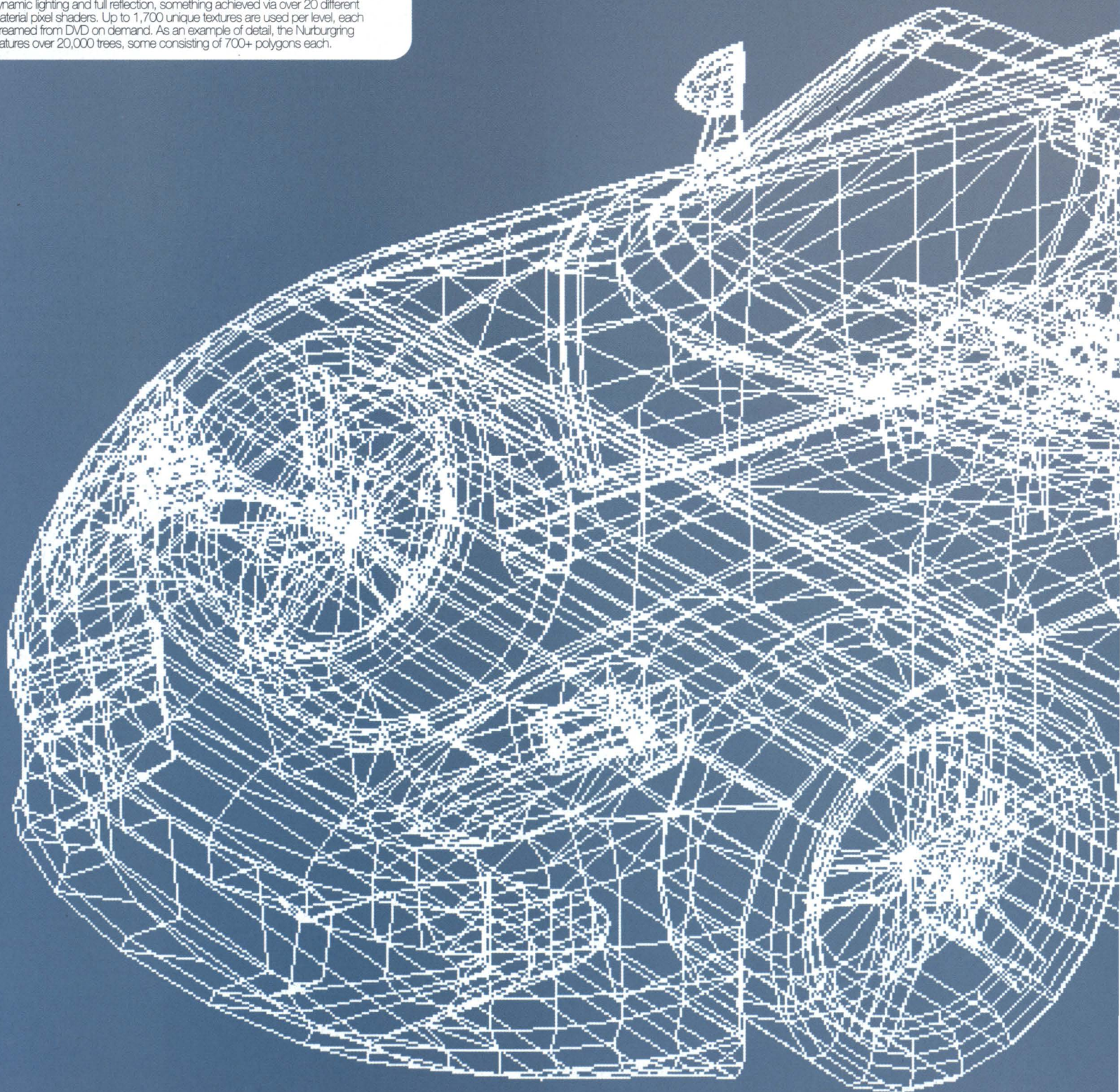


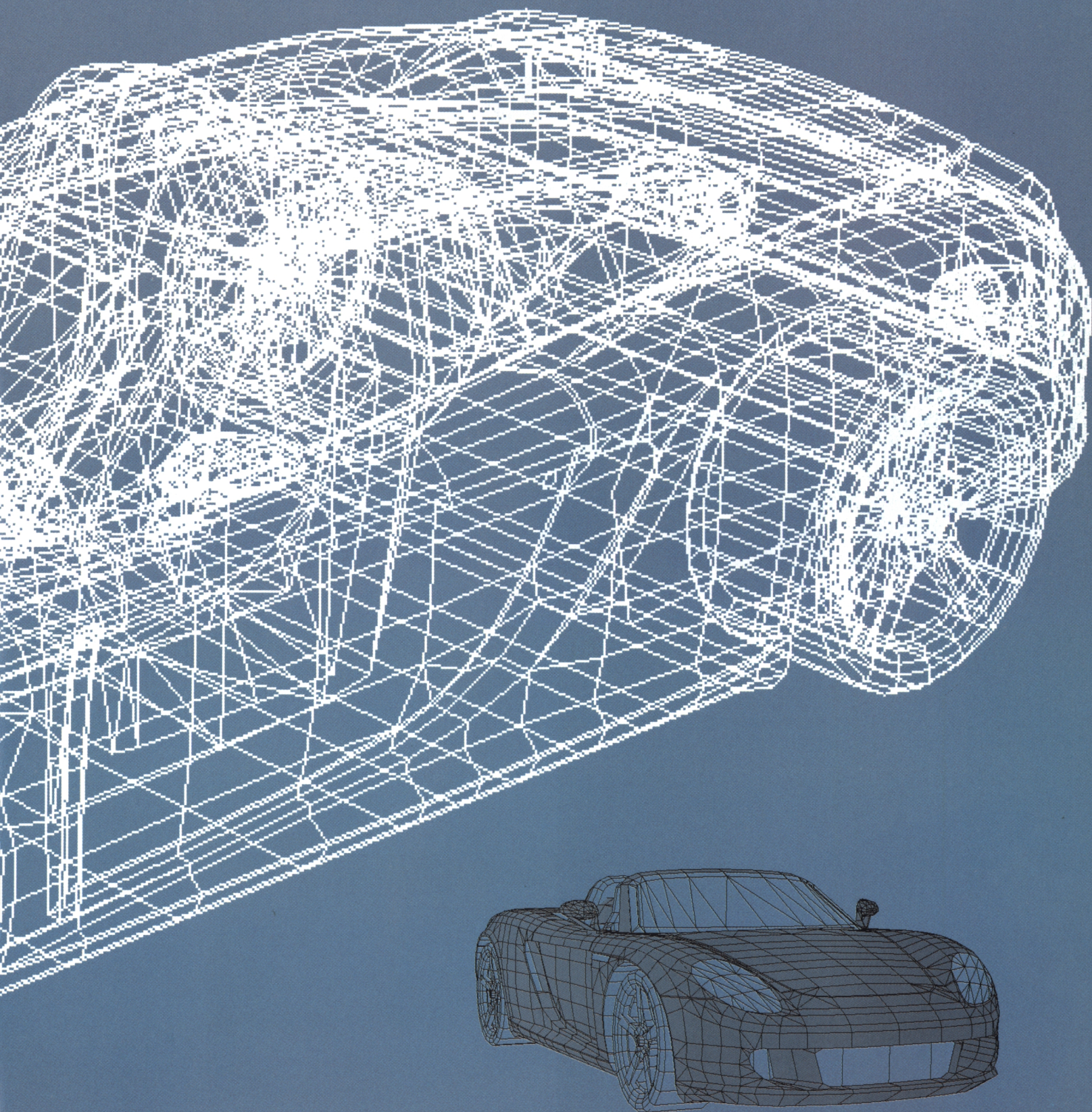
The big picture

Porsche Carrera GT raw model from *Project Gotham Racing 2*

Developer: Bizarre Creations

Info: In-game, each vehicle is constructed from over 10,000 polys (not including driver or additional particles) and rendered with multiple layered textures, plus speed-dependant rendering of blurred wheel alloys. A typical racing view would involve over 200,000 polys of a scene constructed from over one million and displayed using cube-mapping, car self-shadowing, dynamic lighting and full reflection, something achieved via over 20 different material pixel shaders. Up to 1,700 unique textures are used per level, each streamed from DVD on demand. As an example of detail, the Nurburgring features over 20,000 trees, some consisting of 700+ polygons each.





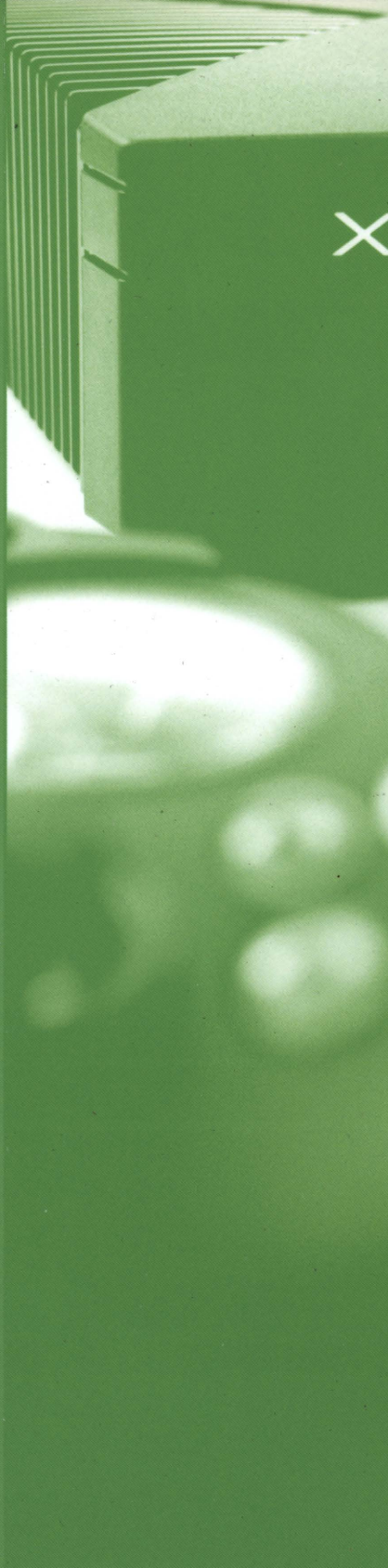
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